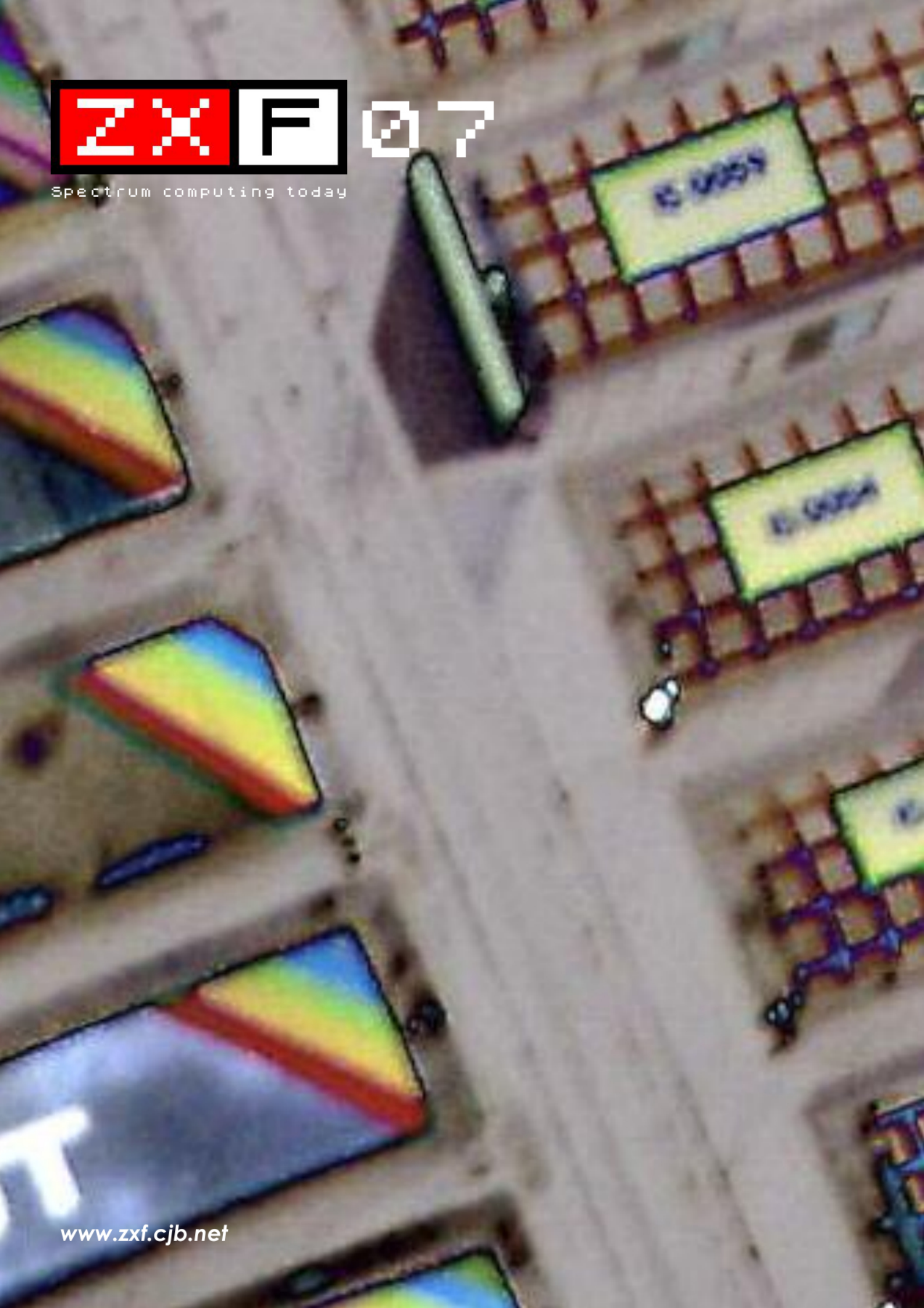

ZXF 07
Spectrum computing today
www.zxf.cjb.net

## PRICE LIST (prices checked 20 April 2004)




**New:**

| | | |
|---|---|---|
| PC-PSU with supply for 2 Floppies and MB02 | | 36,00 € |
| MB02-Printerlead | | 13,00 € |
| Proface AT Extern (Interface for connecting PC-Keyboards to Spectrum) | | 69,00 € KS |
| Proface AT Intern (internal interface) | | 62,00 € KS |
| Melodik AY-Soundbox (unboxed) | | 24,00 € KS |
| +2 Cassette recorder | | 36,00 € |
| Floppy Disc drive (1,86 with MB02, 720k with Opus, 780k with +D) Please specify | | 24,00 € |
| PSU for +2A/B and +3 or PSUI for +2 (also 48k and 128k) Please specify | | 29,00 € |
| FDD lead for 2 drives | | 4,00 € |
| Multiface 128 (works also on 48k Spectrums | | 26,00 € |
| Dust Cover 48k+/128k | | 8,00 € |
| Plus 3 Tapelead | | 9,90 € |
| Normal Tapelead | | 3,00 € |
| Spectrum +2 Lightpen | | 36,00 € |
| Spectrum +3 Lightpen | | 27,00 € |
| Phaser Gun with Software (Tape or +3) | | 19,00 € |
| SCART-Monitor cable (choose for 128k/+2 or +2A/+3) | | 25,00 € |
| VGA-BOX (connect Spectrum 128/+2 to VGA monitor) | | 49,00 € |
| VGA-BOX Multi purpose (Connect any PC monitor to Spectrum 128/+2) | | 79,00 € |
| +3 drive belt | | 2,00 € |
| Silver paper for ZX Printer | | 5,00 € |
| Keyboard membrane 48k | | 11,00 € |
| Keyboard membrane Spectrum +/128k, new quality, not aging | | 21,00 € |
| Spectrum keyword stickers | | 8,00 € |

**Used:**

| | | |
|---|---|---|
| Sinclair ZX Spectrum 128k, complete with all cables | | 129,00 € |
| Sinclair ZX Spectrum +2, complete with all cables | | 79,00 € |
| Sinclair ZX Spectrum +2A, complete with all cables | | 69,00 € |
| Sinclair ZX Spectrum +3, built in 3" drive, complete with all cables | | 99,00 € |
| Sinclair Spectrum 48k (Gummy), complete with all cables + Introduction Tape | | 64,00 € |
| Sinclair Spectrum 48k +, complete with all cables + Introduction Tape | | 64,00 € |
| +3 Drive (tested) | | 29,00 € |
| Interface I | | 69,00 € |
| Microdrive | | 25,00 € |
| Wafadrive | | 39,00 € |
| Opus Discovery Diskinterface with 1 x 720k Drive (new ROM) | | 119,00 € |
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| Joystick (many different) | | 2,50 € |
| Sinclair SJS-Joystick (+2/+3) | | 6,00 € |

**Consumables:**

| | | |
|---|---|---|
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ZXF

Spectrum computing today

**SPRING 2004 Issue 7**

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**If you enjoy ZXF** and you want it to continue then consider yourself duty bound to let me know this (mail@cwoodcock.co.uk or by the feedback form). All other feedback will be gratefully received too.

**ZXF now has a voluntary purchase scheme.** If you have downloaded and enjoyed an issue of ZXF, and if you are able to afford to, please consider paying £1 for your issue via the Paypal button on at the ZXF website ('magazine' page).

If you would like to contribute to future issues of ZXF - even if it's just to write a letter - **please do**; contact me again by the email address below.

**Editor:** Colin Woodcock (mail@cwoodcock.co.uk)

**Website:** www.zxf.cjb.net

**Contributors this issue:** Kevin Bennet, Matthew Harrodine, Matthew Westcott, Nick Humphries, Darran Jones, James Zeun, John King and Thomas Eberle. A big thankyou also to all letter writers.

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# edit

Welcome readers old and new to ZXF magazine.

It's been an extraordinarily busy few months. The number of developments within the community have been staggering, from an online version of *The Complete Spectrum ROM Disassembly* to the first installment of a downloadable Spectrum documentary; from a new ZX toolbar for Internet Explorer to a live concert by the *AY Riders* in Poland. And then there's the new magazine, *Retro Gamer*, and its fantastic success. It takes quite a while to put together an issue of ZXF alongside all my other commitments and, let me tell you, putting together this issue's news section has been quite a challenge. It's the biggest news section yet.

Any doubts about a rise in interest in retro gaming can now be safely put to rest, it appears, and I can't help but feel that the coming months will be looked back upon as a golden age in its own right in years to come. A new market has been exposed by *Retro Gamer* and I have no doubt that its success will be causing a lot of business people to look very closely at how they might exploit this. I'm still hoping that we'll see a Spectrum of sorts in the shops by the end of the year - not a 'real' Spectrum, of course, but one of those fancy TV plugin gizmos pre-loaded with a small selection of popular games. The ZX Spectrum - the rubber-keyed version, of course - is iconic in its status in the UK and to ignore its attractiveness during a period of mass interest in the genre would seem to me to make little business sense. As *Retro Gamer* announced in its opening issue - the one that sold out of its 40,000 copy print run - they "simply couldn't launch a retro magazine without running a feature on the Sinclair range of computers." Exactly.

Whatever happens on the high street, we can be sure that the Spectrum will continue to be supported by those who have been an active part of the community since long before this new interest began. How long the interest will remain at the mainstream level I can't say, but my sincere hope is that when it does all calm down again the 'long term' Spectrum community will be swelled by new members looking to bring their own creativity to the scene. I am continually astonished by the contributions made by the existing members of our community - as evidenced by this issue's news section - and I know that the Spectrum is safe in their hands.

*ZXF* is currently published every four months - in April, August and December. If you would like to write for a future issue please contact me at the address below and I will be delighted to discuss with you your ideas. Game reviews, event write-ups, letters and articles are all very welcome. For the August edition, please have your contributions with me no later than Sunday 11th July.

Until August...

**Colin Woodcock**

mail@cwoodcock.co.uk

## NEW TO THE SPECTRUM SCENE?

The essential sites you need to visit.

**www.worldofspectrum.org**
The cornerstone of the community: emulation, discussion, downloads and online gaming.

**www.spectaculator.com; www.ramsoft.bbk.org; www.worldofspectrum.org/emulators.html**
You'll be needing an emulator to play those games on...

**www.the-tipshop.co.uk**
More tips, hints and pokes for those games than you can shake a pointy stick at.

**www.ysrnry.co.uk; www.crashonline.org.uk; www.sincuser.f9.co.uk**
The online editions of all your favourite Spectrum magazines: YS, CRASH & Sinclair User.

**http://raww.org/**
Spectrum news from around the world. Constantly updated!

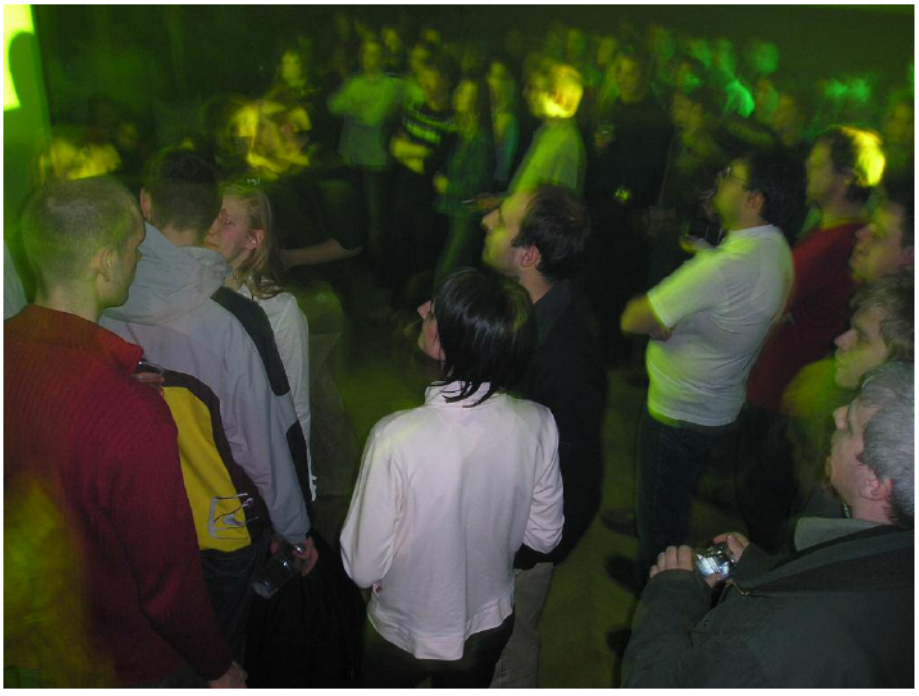
**www.sinclairfaq.com**
All your further Spectrum questions answered.

# new MUSIC

## THOSE BUSY RIDERS

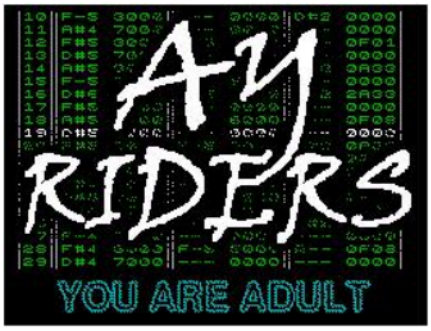
***>New album/ZX album/Warsaw gig***

Once again those 8-bit tune masters, the AY Riders, have released a new record. *'8 Bits is enuff'* is their third MP3 release of music crafted entirely from the Spectrum 128's AY chip and follows on from their 2003 album of covers, *'Do you remember?'* The team have changed slightly since then, with Megus moving on to PC music, to be replaced by a new member, the clearly very talented C-jeff. And this is their longest release, with no less than 31 tracks. **http://ayriders.zxdemo.org/**



So, with three records under their belt, the next milestone has to be live performance, right? And it all happened at OFF Club in Warsaw on 28 February, pulling in an audience of over 200, reportedly. Pictures, from which this one is taken, available at the Riders' site - and a report by Rider **Matthew Westcott** starts below.

Whilst you're there you might also like to check out a new release of the Riders' original record **You are adult** for the Spectrum itself. This is the first of the records to be released in this way (in .TAP format) so that the music can be listened to the whole album on the machine that actually created it. It's a rather snazzy interface too.







## AY RIDERS PLAY WARSAW

***>Matthew Westcott (aka Gasman) reports on the concert***

**2am, Sunday 29th February 2004.**

Everything was quiet after a night of non-stop chip music. 250 revellers were heading home, dazed from experiencing a concert like no other. Equipment was packed up and piled high in car boots, and we were on the drive back to the home of Wojtek, the main organiser, to catch some rest. That's when Wojtek posed the question: When you first heard the suggestion of an AY Riders concert, what was your initial thought?

Factor6, TDM and I were in agreement - we all thought it was a stupid idea.

It was back in September, at the drunken get-together known as International Vodka Party, that the idea was raised. Yerzmyey announced to the assembled Riders that a club owner in Warsaw wanted to host a live performance of the band. We immediately started wondering how on earth

**continued on page 6**

## ZXFM

***>Starglider Radio Launches***

What do you do when you're bored on Boxing Day? Launch a radio station, that's what! So decided **CSS** veteran **Starglider** this year, spotting an eight bit gap in the growing phenomena of online radio. Ok, so there's no Chris Moyles to talk between the tunes on this new ZX Radio service, but when they're all Spectrum AY tunes who needs that sort of banter anyway?

Containing an ever expanding playlist, from which tunes are played at random, **Starglider Radio** is even open to requests (although the list - at the moment - is being restricted to game tunes only). You can listen to it at **www.starglider.dynu.com/radio/**

new MUSIC

continued from page 5

tracker music could work in a live setting. Bizarre as the idea sounded, how could we possibly refuse? It would give some real exposure to our music and put us on the map for sure. Either we'd take the opportunity, or we'd spend the rest of our lives wondering what it might have been.

In the months that followed, we got a taste of how big this venture was going to be. The first revelation was the announcment that PZU, Poland's largest insurance company, would be sponsoring the concert. Then came the unhappy news that Megus wouldn't be able to obtain a passport so soon before his military service - we even had the Russian Embassy in Poland on the case, but unfortunately our efforts were in vain. Finally, as the big date drew near, the media coverage intensified to a proportion we could barely have imagined. We were showcased on two national radio stations, and not just with throwaway mentions - most of a one-hour programme on Jazz Radio was devoted to our music, and Talk FM hosted a phone-in competition and an interview with Yerzmyey.

On Friday afternoon I touched down in Warsaw, armed with my "trusty" Spectrum +2 and +D disc drive. Yerzmyey was next to arrive, accompanied by Karolina, Hellboj, Atari maniac Pinokio, and a vast pile of hardware brought over from Krakow including a Timex 128K, a Sprinter, a PC to serve as the disc drive for the Sprinter, and monitors for the lot. Later in the evening, delayed slightly by the train service, we were joined by the Czech duo of Factor6 and TDM, who brought along a selection of original Sinclairs equipped with Zilog's CompactFlash interface.

Our first night was spent, unsurprisingly, with large amounts of vodka at Wojtek's place, reading over the collected magazine clippings on the concert and getting our daily fix of demos and music. Eventually we all settled down for some rest, ready to get down to business the next day.

The Galeria OFF club consists of a cosy little bar (where Pinokio swiftly commandeered a corner for his Atari kit, and set about coding an intro for a demo party the following day - hardcore guy), backed on to a larger hall which, judging from the posters dotted around the walls, serves as a theatre in its other life. When we arrived it was a barren empty place, with just a couple of dilapidated sofas pushed against the walls, but that was soon to change. While our equipment was loaded onto the stage, perched on a few small tables, a giant projector screen was being constructed, eventually to cover most of the side wall of the club.

The first bit of decoration to appear was Factor6's spare rubber-key 48, displaying the constant fluctuating patterns of Busysoft's Song In Lines demo. I honestly can't remember whether that survived into the actual performance - I've got a feeling we sacrificed the light show so that we'd have enough monitors for the full crew. The inevitable pre-concert crises happened - the shortage of monitors, the disappearance of important audio connectors - all to be resolved at the last minute. The reassuring beep of the Spectrum self-test echoed around the hall, and we all breathed a sigh of relief.

The crowds wandered in soon afterwards, to be greeted by the sounds and sights of Taquart's epic Atari demo 'Numen'. With the dancefloor filled, the lights went down, and it was showtime.

Robot Adolv, the support act, were a stroke of genius. The simple idea behind their performance - a guy and his girlfriend, dressed in robot costumes adorned with silver foil, heating ducts and lightbulbs, play Commodore 64 chiptunes, make their way to the front of the stage and dance around. They really captured the imagination of the audience, and deserve a huge amount of credit for setting up the atmosphere of the night. Before the concert, our greatest fear was that the club would be filled with people standing still and staring blankly, bewildered by the strange bleeps and squeaks - but with such strong central characters to take the lead, it didn't take long before the whole audience was copying their moves, as if dancing to chip music was the most natural thing in the world.

We didn't have a formal set list planned in advance - the plan was to cycle through Yerzmyey, me, TDM and Factor6 in turn. That way, we'd be able to pick appropriate tracks to suit the mood as the evening went on, and keep the set nice and varied.

To accommodate our absent friends, Factor6 played a selection of X-agon's tracks along with his own, while I took on Megus and C-Jeff's music - since Protracker (the most popular program among Russian ZX musicians) isn't available for my disk interface, these were played with the help of a pretty-looking player routine I'd coded a couple of days earlier. Yerzmyey's Sprinter was on hand throughout the performance to supply us with spooky ambient sounds to fill in between tracks, especially composed by Yerz for the occasion.

We kicked off the show with Yerzmyey's Koto Mix, and straight away we got to find out what sort of workload was involved. It was DJing raised to the tenth power. We were battling with temperamental ancient hardware, and juggling the sound output of five computers into a continuous performance was absolute may-hem. In all honesty, it must be said that the guy manning the mixer desk was not the sharpest tool in the box that

night... Yerz ended up having to supervise every transition between tracks, while acting as translator for the rest of us. Getting the timing right for the changeovers was a nightmare, and usually involved plenty of shouting and improvised hand signals across the table.

And yes, there were some technical problems... the dreaded edge-connector wobble made an appearance just a few notes into my track 'Primality', after I tapped the keyboard a little too hard, causing the music to crash into oblivion. On a couple of occasions, stray beeps and keyboard clicks escaped from computers that really should have been muted out. The mistakes weren't really a big deal, though; most of the time the audience were enjoying themselves too much to notice or care, and the rest of the time they accepted it for what it was, the inevitable consequences of using genuine 20-year-old retro hardware - after all, that's what live music is all about, right? - and in general the audience were very appreciative. Perhaps a bit too appreciative on a couple of occasions, in fact... one such time was during my second attempt at playing 'Primality', when a girl came up and tried to start a conversation with Yerzmyey. All the frantic gestures in the world couldn't keep her away from the stage - she clambered over a bit too enthusiastically, and nudged the table causing my +2 to crash again :-/ ... luckily it was near the end of the track anyway, and TDM was poised to launch into his next track, Electric City.

All the while, the large projector screen played a continuous display of demos, prepared by Yerzmyey - and although we had no real way of synchronising the visuals to the music, this proved very effective. It was a very proud moment for me when my own demo Losing Victoria came up, and I saw people in the audience taking time out to admire the visuals.

In the 90 to 120 or so minutes that we played, we managed to cover an eclectic mix of styles, from the chilled to the hardcore, all while keeping the pace up for the more energetic visitors. It's been a tricky business to reassemble the playlist from our combined memories of the night, but here's our best shot:

*Yerzmyey: Koto Mix*
*Gasman: Summer Mood (Megus)*
*TDM: Neverending Story*
*Factor6: Blah Blah Gal*
*Yerzmyey:*
*[Gasman: Primality, aborted]*
*TDM: FA Intro*
*Factor6: I Am Fine (X-agon)*
*Yerzmyey:*
*Gasman: Primality*
*TDM: Electric City*
*Factor6: Bits Main*
*Yerzmyey:*
*Gasman: Losing Victoria*
*TDM: Genetic Error /End*
*Factor6: Angeldust*
*Yerzmyey:*
*Gasman: Around Past (C-Jeff)*
*TDM: Super Grand Prix*
*Factor6: DJ Factor6*
*Yerzmyey: 30 Minut*
*TDM: Exception*
*Factor6: Co Ja Vim (X-agon)*

My only real regret about the concert was to do with the way the venue was set up - there was a disconnect between the audience and ourselves, because we were stuck behind a wall of computers and monitors (hmm, I suppose that concept worked a bit better for Pink Floyd...) and the big screen was at right-angles to us, so they weren't facing our direction for much of the time. As a result, we didn't really get to hear much audience feedback for ourselves, but the messages that were relayed on to us by Wojtek were overwhelmingly positive. The comments ranged from heartfelt thanks from nostalgic old-timers, all the way to rave reviews from newcomers experiencing the music as if it was from another world.

One bit of feedback we did receive first-hand came shortly after midnight, just as the organisers were starting to turn the lights up and usher people away. A big burly guy came up to the non-Polish-speaking members of the group, and demanded to know why we'd stopped playing... for a moment it looked as if we were going to be threatened at knifepoint to start up the music again! TDM meekly pointed him in Wojtek's direction, and on seeing the friendly animated chat that followed, it quickly became clear that he was just one more very enthusiastic fan...

And so to the future. The experience was one we're keen to repeat, and while we have no more confirmed dates at the moment, there's been some talk about future gigs elsewhere in Poland - and daydreams about venues further afield, too. I for one hope that the day will come when Megus and C-Jeff will be able to join us for a performance. For now, the folks of 8 Bit Front have their sights set on a much bigger concert in Warsaw - thousands of visitors rather than hundreds - in a very dramatic-sounding location (I can't give too much away yet). The plan is to give the band and the computers a more central role, while the demo visuals light up the stage around us. And, most importantly, we want big screens showing the soundtracker display.

Why so important? Well, just try showing a tracker screen to someone from outside the scene and you'll see. As they gaze at the digits scrolling away, you'll hear them make a comment that perfectly demonstrates how micromusic will capture the imagination of the world, given the chance.

"Woah, it's just like the Matrix!"

**© 2004 Matthew Westcott**

# new MEDIA

**What an interesting few months it's been. RETRO GAMER in particular has taken the magazine racks by storm and has gone from quarterly to bi-monthly to being published every six weeks. Will Future Publishing or any of the other big publishers be considering a competitor, I wonder? Will Amstrad finally wake up to the potential of their property and release a TV plugin Spectrum (it has been rumoured, by the way, in es.comp.sistemas.sinclair)? Either way, 2004 has already become a landmark year for retro computing.**

## RETRO GAMER

***>Successful launch to new magazine***




ZXF reported on it last issue; since then **Retro Gamer** has become a reality - and, it would appear, a very successful one at that. The first issue's 40,000 copy print run sold out within a few weeks, leading to the decision to go from a quarterly to a bi-monthly and now 6 weekly publication. ZXF salutes the vision of editor **Martyn Carroll** and the courage it must have taken to be the first.

So there have already been three issues of **RG** published. The magazine is a lively mix of articles that cover many aspects of the scene, including articles about software houses (a particlarly fascinating article in issue one about Mastertronic), collecting, platform overviews, magazines and remakes. Spectrum users have so far had absolutely nothing to complain about, with our beloved machine taking centre stage in issue one, an in-depth article on **CRASH** in issue two, plus a major feature on **Cronosoft** in issue three!




Issues one and two came with a cover-mounted CD simply jam-packed with games, re-makes and emulators of all types. So jam-packed, in fact, I was concerned initially that it might prove difficult to sustain this sort of quantity in the long run. I needn't have worried; **RG** have come up with an extremely creative solution for the third issue that's got the readers very excited indeed: a collection of classic **Gremlin** games - 200 in all spanning seven formats (Spectrum, C64, C16, Amstrad, BBC, Atari ST and Amiga). The speculation within the various forums that something similar could be achieved with distribution denied labels **Ultimate** and/or **Code Masters** (ie, some sort of licencing arrangement to cover-mount the games) is getting a lot of people very excited in a dream-come-true sort of way. If this were to happen, it really would be a win-win solution to a problem that has frustrated the various retro communities for a very long time now.




Speaking of forums, a website for the magazine is evolving rapidly at **www.livepublishing.co.uk/retro/** (as a taster, their entire article on Sinclair from issue one is available on the site for free online reading - just point your browser at **www.livepublishing.co.uk/retro/sinclair.shtml**) and a dedicated retro forum there is growing a large and loyal collection of posters.

Perhaps the most impressive and heartwarming aspect of **Retro Gamer** is the editorial team's apparent willingness to listen to and take on board the comments made by posters on this forum. Right from issue two, in fact, it has been apparent that people are listening to requests being made and acting on them, and this sensitivity to readers' requests has not gone un-noticed by the posters themselves. In contrast to some of the recent attempts made by the gaming press to respond to the growing interest in retro gaming, **RG** appears to be earning itself thumbs up all around. And long may this continue.

Something like this has been a long time coming for the retro community. It's still early days, but **Retro Gamer** feels already that it's been well worth the wait.

## GAMESTM

***>New editor for Retro supplement***

*So, whilst **Retro Gamer** is doing a good job at winning our hearts and minds, the **Retro** supplement of monthly games magazine **GamesTM** has gone and got itself a new editor in the form of Darran Jones. Starting very positvely in November 2003, with a **Crash** cover, a big feature on the Spectrum, another on **Ultimate** and a history of video gaming written apparently by **Newsfield**'s mysterious **Lloyd Mangram**, GamesTM's Retro mini-mag has since earned criticism from the eight bit community for its subsequent over-focus on consoles. All this might be about to change, according to Darran, so ZXF took the opportunity to have a few words with him about this.*




**What's your background in retro gaming? Do you have any favourite platforms?**

Playing on my Aunties Binatone system is one of my very earliest memories, but it was the good old Spectrum that was my first true gaming love. Since then, I've followed the majority of machines released and also have a special place in my heart for my import SNES which I foolishly traded for an Amiga 1200 (I had over 70 SNES games and I still feel sick about it now).

**What sort of changes do you have planned for the Retro section of GamesTM?**

As with any sort of changes, they will happen, but slowly. One of my biggest goals is to provide a greater balance to the section as it's always had a heavy empathsis on the console side of things. I'm also planning to make sure that our readers are aware that there are still plenty of games being released for many of these supposedly dead consoles and computers (not too long now until Turrican 3 on the C64). As of issue 19 you should start seeing several changes, with the section starting to appear as more of a mini mag in its own right.

**In Live Publishing's 'Retro Gamer,' we now have a magazine dedicated in its entirity to retro gaming (and doing well, it sounds); is there an awakening going on within the mainstream magazine media towards retro gaming as a new 'gap in the market' and does your appointment reflect this?**

In many ways I see gaming as being similar to fashion. Look around at the moment and a lot of cloths are now heavily indluenced by the Eighties. The continuing succes of Retro Gamer is great to see and I certainly see the magazine as great competition for gamesTM's retro section. Of course, it's only little old me on my lonesome (as opposed to a dedicated writing team), but nevertheless Retro Gamer's success is a great indication to how popular retro gaming currently is.

## CONGRATULATIONS TO SHAUN BEBBINGTON!

***>Retro warrier to work for new magazine.***

**Micro Mart** columnist **Shaun Bebbington** has played a major role in the promoton of the retro scene in the mainstream media; his **Retro Mart** column in Micro Mart has worked hard at promoting current developments across a wide range of platforms, including the Spectrum. ZXF is therefore delighted to learn that Shaun will be taking up a position of staff writer at **Retro Gamer**, following his extremely informative article on Commodore in issue two (worth reading for the William Shatner ads alone). Well

new MEDIA

## "I LEARNT THE OTHER DAY THAT THE RUSSIANS STILL USE THEM VERY WIDELY..."

***>Sinclair talks Spectrum on BBC4 documentary***



This retro computing stuff must be serious. Subtitled 'The History of the Home Computer,' *Hard Drive Heaven,* broadcast on BBC4 back in February, attracted none other than the knight himself, Sir Clive Sinclair, to its conveyor belt of talking heads.

A mostly British examination of the route the computer has taken into our homes, the half hour documentary featured black and white clips of Tommorrow's World ("no matter how sophisticated computers become, we must remember that it is still we who are the masters and they the servants" - something corporate IT departments don't seem ever to have learnt), numerous clips of Dominik Diamond laughing hysterically about the attraction of *Pong* and his mum's perception that he might use his new Spectrum to learn something, a reflection on the BBC's *Computer Literacy Project* - including, of course, the BBC Micro itself - and an examination of the phenomenon of bedroom programmers turning into sports car driving, shoulder-padded jacket wearing business people. Oh yes - and an interview with the Oliver Twins.

For us, of course, the highlight was Sir Clive's appearance. Speaking about both the ZX81 and the Spectrum, Sinclair talked initially about his identification of a new market for home computers and went on to note his recent discovery of the longevity of the Russian clones. Perhaps his most poignant comment, however - certainly the one most likely to resonate for us - concerned his first thoughts about the purposes his machines would be put to:

*"When we first started, we realised obviously that there would be a games aspect, but the first appeal was to people who wanted to get their hands on one and do some programming themselves. Which they loved doing, I mean children took to that dramatically. And it's a bit sad today that that really isn't available to them. That's all changed. But in those days, children could get hold of one of these and very swiftly learn to program."*

And here we are, still writing games for those machines 20 years on. But did Sir Clive forsee the Crap Games Competiton?

new Also

### WILLY DISKS GO ON SALE

The development disks for the never-completed sequel to Jet Set Willy, **Megatree**, went up for auction in aid of **Cancer Research UK** at **www.ebay.co.uk** on Monday 19 April. The 18 5.25" floppies for the **C64** currently stand at £78.

**www.megatree.com/PR0003.htm**

### WILLY BOX SET

Described by one CSSer as "the most evil Spectrum program created since Sqij," **Andrew Broad**'s latest MM/JSW release - the **Part Willy Box Set** includes mirrored versions of both **Manic Miner** and **Jet Set Willy** alongside the 'main feature' of **Party Willy** (part one) - a new and fiendishly dificult MM/JSW game. Part two is due 23rd April.

**www.geocities.com/andrewbroad/spectrum/download/**

### EVENTS UPCOMING

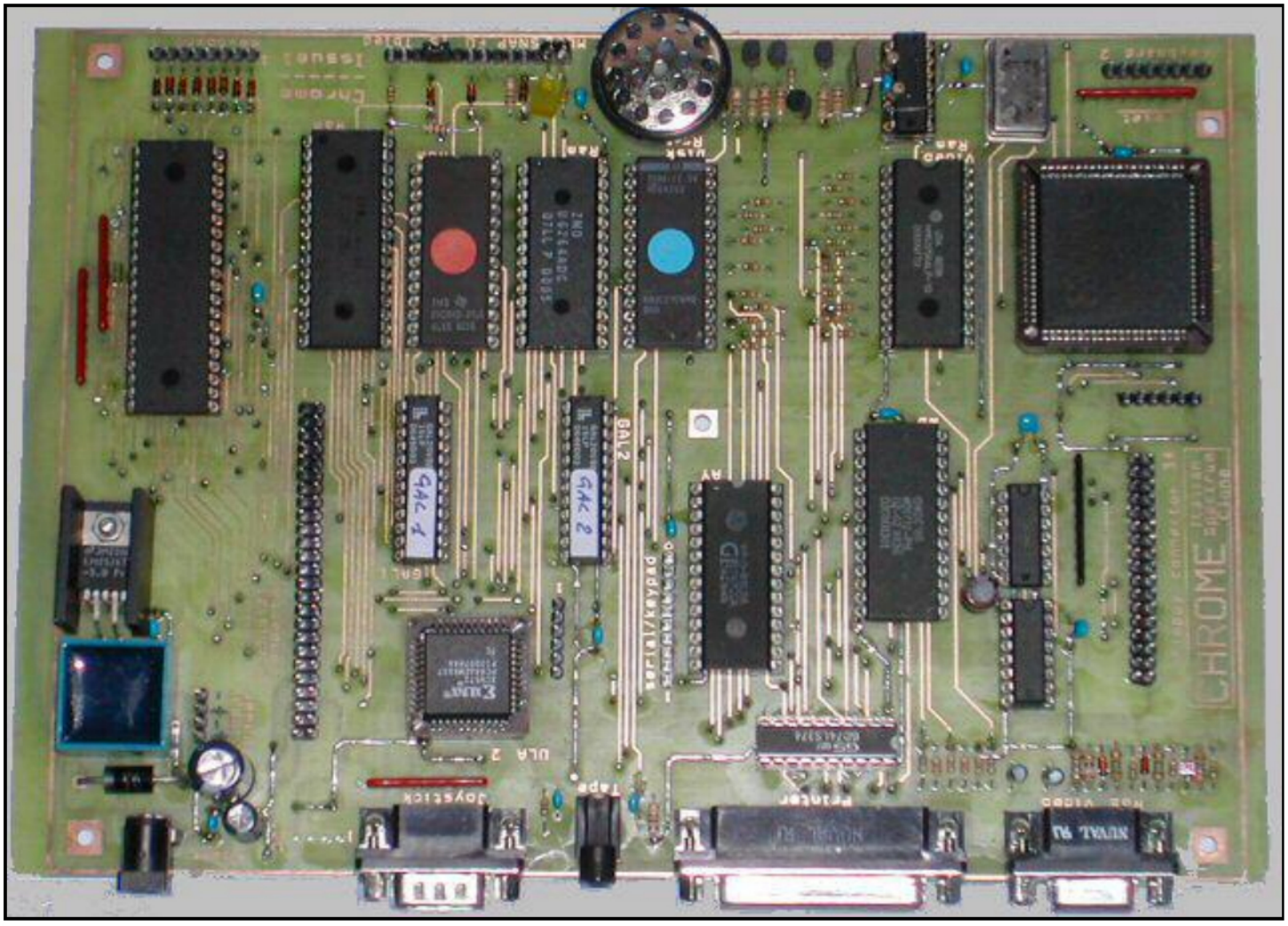
A couple of dates for your diary if you're in the mood for retro gaming experiences this summer. First up is the latest **Retrovision** event being held at The George Hotel in Frome, Sommerset on 19th and 20th June. Tickets cost £15 and can be bought online at **www.retrovision.org.uk**.

And on 24th and 25th July you can choose to atend the first annual **Classic Gaming Expo UK** at Fairfield Halls in Croydon. Sponsored by **Retro Gamer**, tickets will cost you £7.50 per day (£5 for children). Atractions will include a workshop on building your own arcade machine. Details at **www.cgexpo-uk.com**.

### PASMO V 0.3.6

Pasmo is a Z80 cross assembler, which enables you to write your machine code in your favourite text editor on a PC and then assemble it into lovely Z80 machine code. Or so I gather. Version 0.3.6 can be now be downloaded at **www.arrakis.es/~ninsesabe/pasmo/**

new HARDWARE




## CHROME COMPLETE

***>Italian Spectrum clone finished***

Many of you no doubt are aware of **Mike Wynne**'s **SpeccyBob** project, but did you know a similar attempt to clone the Spectrum is now complete, with details available at **http://aticatac.altervista.org/**. Here's a description of the project taken from the site:

> *Chrome project was developed starting from Speccybob design (Thanks Mike) but while speccybob was made only with TTL chips, Chrome features 2 CPLD from Xilinx that emulates not only 48K spectrum but a more powerful 128K, 7 MHz Z80 clock and floppy disk interface. This means also a very small number of chips and a compact board too.*
>
> *Every logic devices are fully reprogrammable on board enabling changes to original design in real time.*
>
> ***Chrome Specification:***

| | |
|---|---|
| ***Cpu*** | *Zilog Z80C, Clock frequency 3.58 / 7.1 MHz* |
| ***Ram memory*** | *64K (spectrum basic), 8K Disk rom* |
| ***Ram Memory*** | *160K (paged in 16K chunks), 8K Disk ram* |
| ***Sound*** | *3 channel, 7 octave, white noise, stereo output, 1 channel internal speaker* |
| ***I/O*** | *Joystick interface Kempston compatible, Expansion port, I2C interface, parallel printer out* |
| ***Storage*** | *Cassette recorder, Floppy disk 800K capacity* |
| ***Display*** | *Graphic 256x192 pixels resolution, 16 colors, Analog RGB Scart output* |

**Chrome** is a self-build project, of course - this is not something you can buy. All the schematics you'll need if you're up to such a job can be found at the website, as well as relevent links - for example to the Xilinx website. Remember folks - real Spectrums won't last forever: at some point we'll need to build some new ones, and it won't be any good relying on custom ULA chips when we do! This, therefore, is very good work.

# new ONLINE

## ZX VINYL

***>Promotional software examined***

Lovers of Sinclair and vinyl unite... in dismay. Spectrum software included as additional tracks in 80s records was not known for its quality, as this detail from 'The Shaky Game' should demonstrate beyond any shadow of reasonable doubt.

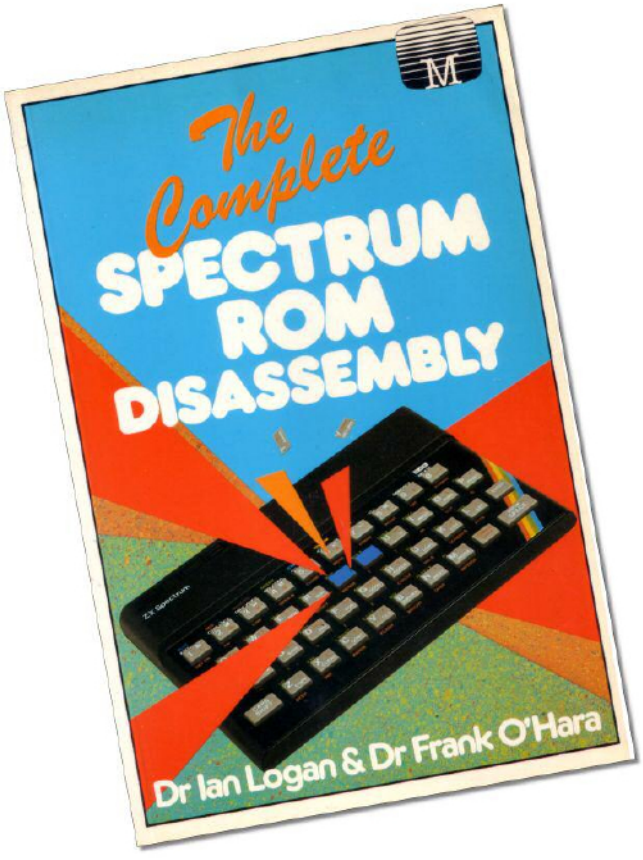



Proving that no nook or cranny of the Spectrum - or, indeed, vinyl - universe should go unexplored in this online age, a new web page has been published exploring this phenomena - sort of the precursor to modern-day 'enhanced' albumns (ie, a free screen saver and a bunch of icons for some sort of instant messenger), it's suggested. **www.kempa.com/blog/archives/000053.html**

## ZXF ONLINE

Some serious thought is going into yet another re-design of ZXF's web presence at **www.zxf.cjb.net**. And for those of you irritated by the pop-unders and other naughty intruders on your visit, the official address of the site will be changing to **www.cwoodcock.co.uk/zxf** with the re-launch, when it happens (these are now part and parcel of the CJB URL masking service, but a re-structuring of the site folders will allow me to make better use of my paid-for domain). It will be a while before the re-launch - the magazine itself always takes priority - but here are a few of the online goodies you can look forward to.

**Sinclair Branded** will be a new sub-site aiming to collect over time information on the **Sinclair Research** range of software




## BIBLE GOES ONLINE

***>CSS regulars convert Spectrum classic***

It started at **www.faime.demon.co.uk/download/** with a 165 MB PDF download: **Mark Street's** image-based version of Dr Ian Logan and Dr Frank O'Hara's Spectrum bible, **The Complete Spectrum ROM Disassembly,** was discovered by **Geoff Wearmouth** and signposted in **comp.sys.sinclair**; Mr Street's bandwith must have suffered somewhat in the following few days as we all raced to download the file. But image-based PDFs aren't searchable and pretty soon there was talk about OCR-ing the entire book. That's where **Chris Cowley** stepped in to co-ordinate a distributed copy-typing effort, volunteers getting a section of the book allocated to them for typing which they them submitted once complete. Time for a role call:

> *J.R. Biesma, Biggo, Dr. J. Bland, Paul E. Collins, Chris Cowley, Dr. Rupert Goodwins, Jonathan G. Harston, Marcus Lund, Joe Mackay, Russell Marks, Eduardo Yañez Parareda, Adam Stonehewer, Mark Street, Gerard Sweeney, Geoff Wearmouth, Matthew Westcott, Matthew Wilson, Witchy*

Not only is the book now complete and online in a variety of formats (Word, RTF, PDF and formatted text), it also incorporates all corrections listed by Geoff Wearmouth at **www.wearmouth.demon.co.uk/errata.txt.** Get yourself over to **http://freestuff.grok.co.uk/rom-dis/.**

## > WORK IN PROGRESS AT WWW.ZXF.CJB.NET

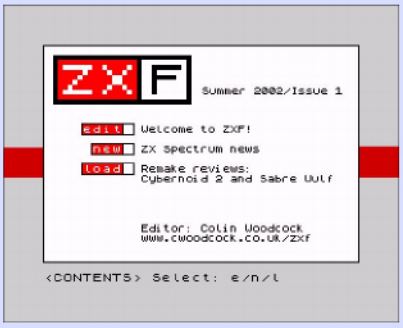



***Sinclair Branded:*** *a website work in progress.*

released by Sinclair during the first couple of years of the Spectrum's life, including cassette inlays, instruction booklets and promotional material. As a taster, you can already download a complete PDF version of the **1983 Software and Peripherals Catalogue** from **WoS** (archive > company pictures > Sinclair Research Ltd), prepared by yours truely over the Christmas holiday.

**ZX PAW** will be a small area of the main site dedicated to the Spectrum version of the **Professional Adventure Writing System**, gathering together a few key resources and a collection of links to other articles and online help. Essentially this will aim to be the number one resource for anyone aiming to develop new adventures for the Spectrum using this wonderful utility.

**TZXF** is another new project - a version of this very magazine for the Spectrum itself. Once again, this is likely to take some time, but the conversion of the first magazine is already underway, using Sinclair's very own **Print Utilities** code to provide a nifty 42 column font for easy readability.







## ZX IE Bar

***>Search bar from Gerard Sweeney***

An increasing number of ZX sites have search facilities on them these days; if, like me, you have come to find yourself spending ages flitting from site to site, trying to track down that 'thing I saw a few weeks ago' then this little baby'll do you well. Released on Christmas day, the Speccy Search Bar from The Tipshop's Gerard Sweeny scans all of the following for your entered search terms:

comp.sys.sinclair (via Google Groups)
Crash Online - internally and via Google
Demotopia - internally and via Google
Planet Sinclair III - internally and via Google
Sinclair User Online - internally and via Google
The Tipshop - internally and via Google
WOS (you can specify a preferred mirror) - internally and via Google
YSAC (http://www.yoursinclair.co.uk) - internally and via Google
YSRNRY - internally and via Google

Currently at verion 1.3, the search bar installs into a little strip across your Internet Explorer window and can be downloaded from **www.the-tipshop.co.uk/ssb/.** Nice one.




## ZX MAPS ONLINE

***>New site for game navigation***

Meant to mention this last issue, but ran out of space; it's a new Spectrum maps site by Pavel Plíva, author of **ZX Screen Snapper** and **ZX Maps Creator.** Clearly Pavel has an interest in game maps, so his new website, **www.zx-maps.wz.cz** is kind of a logical think for him to do I guess.

It's a very well-presented site, easy to navigate and one not afraid to get stuck in at the hard end. Take his map for **Nonterraqueous**, for example: an immense 6144 x 7392 pixels. It all gets easier from there.

There are currently well over two hundred maps to browse online, created by Pavel and others, ranging from **Action Biker** (I can't believe just how small the dark area actually is) to **Zorro**. There are also rather nifty zoom controls to allow you to view as much or as little of the map as you want on screen. Well worth a visit.

new ONLINE

## YSRNRY DOCUMENTARY RELEASE

*>'Chapter One' editing complete*

**Never mind the BBC; what would they know about 8-bit computing anyway (aside from, erm, the BBC)? And the documentary we've all be waiting for is dedicated to just the ZX Spectrum. With a thumping 80s soundtrack, the first 'chapter' of Nick Humphries' Your Sinclair Rock'n'Roll Years video is finally here. Yours truely got himself a sneak preview in March it and was mightily impressed. Mightily. A chat with Mr Humphries followed swiftly.**

**How long have you been working on this project now?**

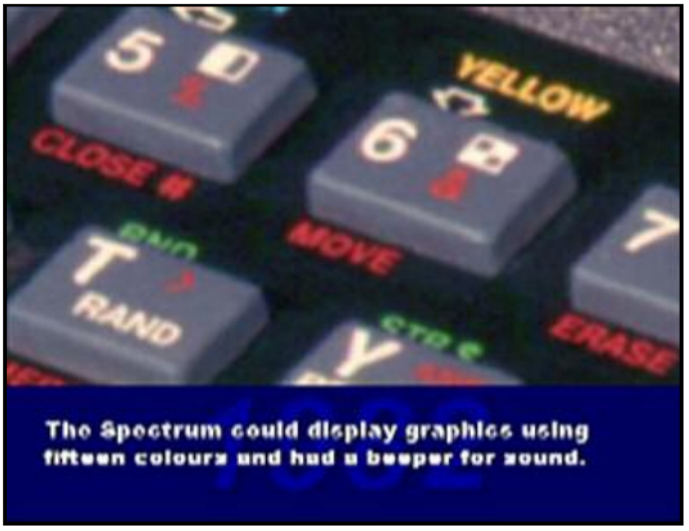
It's touching 18 months now, all in all. I spent a while writing the script of the whole program towards the end of 2002, then spent most of 2003 writing tools that will help me generate the film, and 2004 is the year where it all comes together and start actually producing MPEGs.

**What was the inspiration?**

The BBC's "Rock'n'Roll Years" series. That's also what started off the whole YSRnRY website. The website tried to recreate the mood, the hype and general nostalgia of the 80's but could only go so far as it's really a one-dimensional medium: static text and graphics.

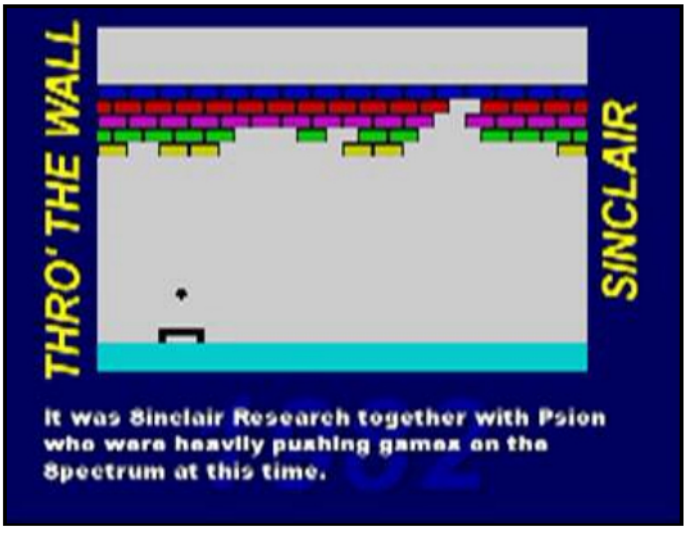
Then I knew I'd be moving apartments at the end of 2002 and that I'd be able to have broadband for the first time ever, and wondered how I could take advantage of the extra bandwidth. There was a thread in CSS after one of the nostalgia programs on TV (probably "I Love The 80's", or "Thumb Candy") and soemone wondered about the possibility of a TV program dedicated completely to the Spectrum. Not a chance, I thought, considering that the audience for that would be quite









low compared with something as vaguely specialist as Thumb Candy.

But on the Internet... all the tools for creating your own MPEGs are easily available. That set my mind going...

**What have you had to learn in order to put the film together?**

I started by learning everything in Adobe Premiere as I thought I'd be using that extensively to plot out and generate the MPEG. When Adobe Premiere turned out to be quite lacking in terms of absolute control over where things go on screen (or at least it wasn't easy enough to use to see how to use that sort of functionality) I decided to write my own 2D animation system in Perl.

So, I taught myself how to take advantage of the NetPBM and ImageMagick toolkits, learnt a bit about graphics transformations, but mainly I had to experiment with what made a programme *watchable*. You couldn't have text flying about the screen if you wanted people to easily follow the programme, and you couldn't have too many slow bits if you wanted to keep the tempo upbeat. The soundtrack itself helps things along a hell of a lot. It's a very upbeat 80's mix of tracks and they sort of offer a fig-leaf covering up the slow image pans that run up to the in-game action.

I thought that soundtrack editing and mixing would be harder, but I seem to have got away with cross-fading tracks at the right moment. I know nothing about mixing two different beats together as you change from one song to another, but the sledge-hammer method of "sod it, do a cross-fade at an instrumental bit" seems to have worked well.

**What resources (hardware, software, etc) have you needed to make it?**

Oooh, this was fun.

Originally I had just one PC, a 128Mb P3-500 Win98 box called Orinoco. When I discovered I needed to render some panning animations at higher detail and calculated how long it would take for a short 20 second movie to be generated, that figure came out at around a week. That's a week without playing any games, maxing out the PC and assuming that Win98 stays up.

I could have got around it by optimising my animation scripts (written in Perl, using NetPBM and ImageMagick, and aren't optimal to say the least), but I decided to take the more interesting choice of getting a secondhand AMD Duron 1.3GHz (called Frodo) and get that running Linux. I boosted the memory to 3/4 of a gig so that all data can be processed in RAM and watched the one week processing time drop down to a few hours. To say I was chuffed would be an understatement. I bored senseless many a friend with tales of how everything sped up beyond belief.

I then bought another second hand PC, this time just a 256Mb Pentium 2 (called OBD - Orinoco's Back Door, obviously), to act as a file/web server. I quickly realised that the finished MPEG for one chapter of this programme could touch 100Mb, and with the YSRnRY website only having 400Mb disk space and 8Gb/month bandwidth, I'd have to get inventive if I wanted the movie to come out at the quality that I wanted it to be.

It's all worked out well. I use dynamic DNS so that obdwww.egyptus.co.uk always points to the OBD webserver, and my ADSL connection is stable enough to keep a webserver on, so providing people can put up with a long download it should be fine.

On the software side, there's the animation scripts I wrote in Perl, which I'll GPL soon so that other people can take them onto the next stage in development, such as optimising them and making them a tad less flakey. I capture gameplay from Spectrum games using the AVI-recording facility in **RealSpectrum**. The other images I pinch from the **World Of Spectrum** archive and also the wonderful **Home Computer Museum** (www.homecomputer.de), the wemaster of which provided me with high-quality photos of every machine that I could think of covering in the programme. For the sound editing, I used Audacity running on Linux. VirtualDub was used to mix the audio with the video, and then TMPEGEnc was used to convert it all to an MPEG.

All the software is either freeware or GPL and it really is quite astounding what you can create with freely available software these days!

**How will the film be made available?**

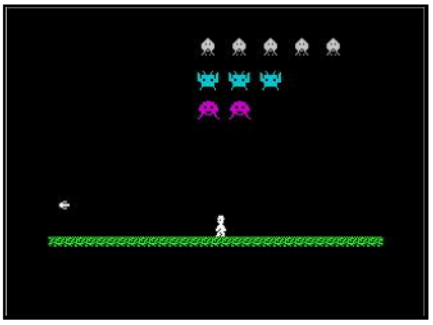
Currently finalising that as I type. There's going to be the bog-standard MPEG download from the website of course, but I'm also looking at P2P. BitTorrent was "interesting" to set up, but now I think I have a BitTorrent server running off of my webserver, and I'm hoping to get an eMule/eDonkey P2P thingy set up too. As my ADSL connection can only pump out 100Mb of data an hour, P2P seems to be the way to go and I'll be heavily promoting that.

In the future, when all the parts of the programme are available, I hope to have some sort of DIY section where you can make your own DVD, and I hope to produce all the menus and that sort of thing. But I don't expect to have everything done for a couple of years yet.

And once everything's done, there are a few other ideas for programmes that I have, providing I'm not sick of it by then.

**www.ysrnry.co.uk**

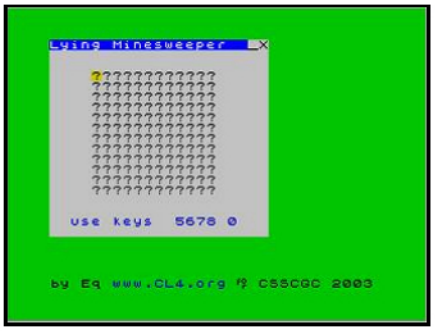
# new ONLINE



Crap Invaders



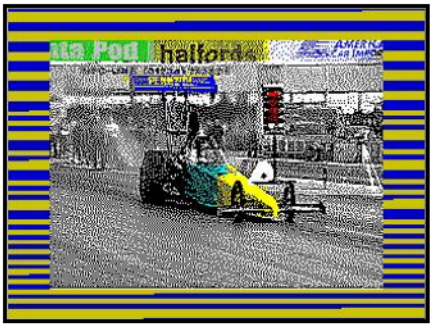
Amazing Unofficial Radiohead Adventure




Lying Minesweeper




Touch my Spectrum



Drag Racer

## CSSCGC2003 RESULTS

***>Woody cleans up***

A very successful 2003 **comp.sys.sinclair Crap Games Competition**, hosted by shady **Dave the Lurker** (aka Dave Mills), finally closed its doors on new entries after the deadline was extended to the end of January. Over 70 submissions were made this year and, in a break with tradition, Dave put the decision on who should carry away the much-coveted title to the community itself in an online vote that lasted a further month.

The results, then:

*1st: Woody - "Crap Invaders"*
*2nd: Jim - "The Amazing Unofficial Radiohead Adventure"*
*3rd: Eq - "Lying Minesweeper"*
*4th (Joint): Monkey - "Touch my Spectrum"*
*4th (Joint): Derek Jolly - Drag Racer*

A somewhat controversial winner, then, because **Crap Invaders** is actually not particularly crap at all. It's rather good, actually. A hybrid mix of **Manic Miner** and **Space Invaders,** Crap Invaders is in fact so popular it's already been revamped by Woody into a follow-up **Super Crap Invaders** and unashamedly copied by **jil** as **Hyper Poo Creatures**. Yes it has.

And so to the future. With development programs such as **Dunny**'s **BASin** making this sort of thing easier and easier all the time, there really is no excuse any more for not getting stuck in and having a go (aside from, for example, having something useful to do with your life). The host for **CSSCGC 2004** is **Jim L**, author of this year's second place entry, *The Amazing Unofficial Radiohead Adventure*. And this year you can submit ZX81 games too!

Make your submissions to:
**http://speccyspoilers.co.uk/cgc2004/**

## NEW INTERLACE PROJECT

***>Mario gets T.I.M. treatment***

**Sadako** is a man of many names, but where he's well and truely made a name for himself is in Spectrum graphics. The die-hard champion of **Dizzy** and **Cronosoft** is now working on a new piece of interlace work which he calls T.I.M. Interlace, for those of you who missed the feature a few issues back, involves the very rapid changing of colours on screen to create the impression of new colours ordinarily not possible on the Spectrum. It's usually quite a flickery affair and Sadako's recent Mario example is no exception, although for a whole third of a screen, I have to say there's a lot less flicker than I would have expected.






The demo works better on a real Spectrum than it does on an emulator (although **Spectaculator** does a pretty good job) and can be obtained from: **http://webpages.charter.net/the.sentinel/TIMDEMO.zip** The zip file also contains a snapshot file showing each of the images in turn that are combined to achieve the multicolour effect. This is a work in progress - and a very impressive one at that - so watch out for more in the future.

eye on ebay

## Ultima: Escape From Mt. Drash (VIC-20)

Winning bid: **US $3,605.00**

Ended: Mar-21-04 19:30:00 PST

Ok, so it's got nothing to do with the Spectrum, but being the **ebay** loiterers that we are (denying it is not going to help you, son), gawking at the price fetched by items of 8-bit paraphernalia is fun whatever the platform. Congrats are duely extended, therefore, to trader **fortrandragon** for turning a 99 cent opener in March into a hefty three-and-a-half grand nest egg. A **VIC-20** holy grail, ***Ultima: Escape From Mt. Drash***, item number 3084975541, received over 30 bids in its climb to the highest amount fetched for a single cassette that I personally have ever seen on ebay. fortandragon told ZXF he was "quite stunned by the price." Stunned in a nice sort of way, I'll wager.

Items like this are a target for ebay **scammers**, so if you come across one be certain it's the genuine article before bidding; if you're selling, embed a copyright message in your image so that scammers can't pass it off as their own in a future auction.




## RETRO GAMER MAGAZINE 1

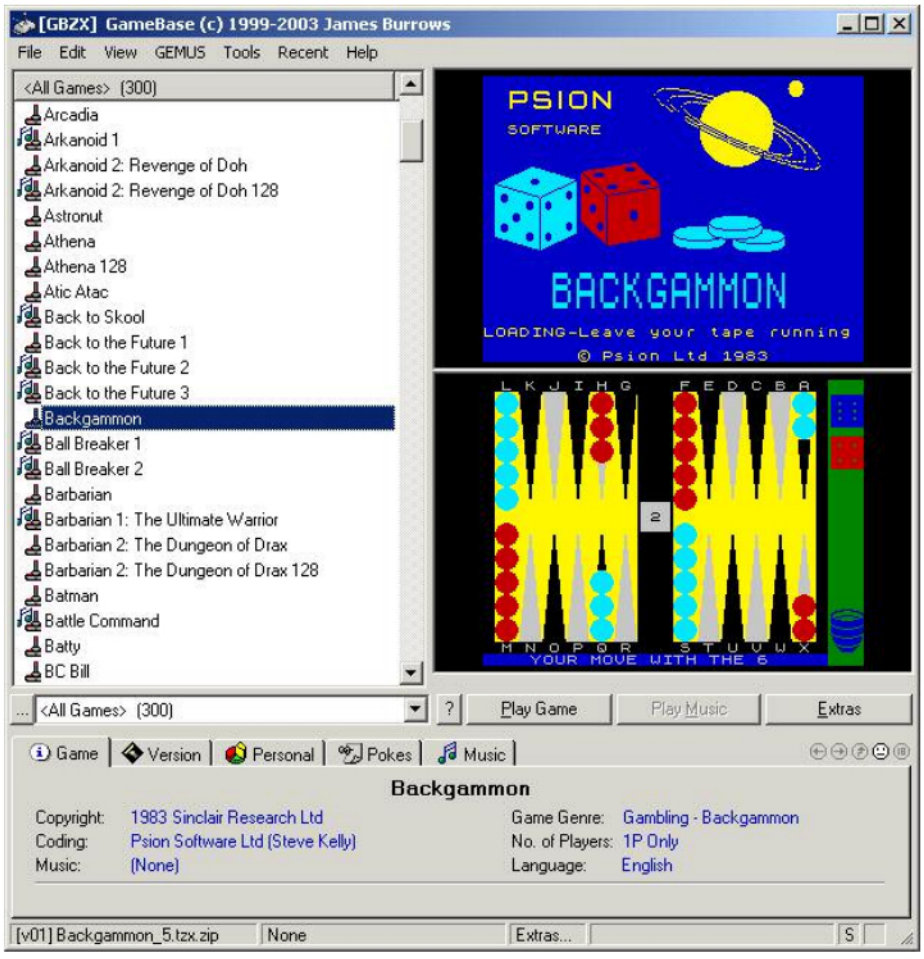
Winning bid: **£52.25**

Ended: 17-April-04 12:03:37 GMT

Barely had the news escaped that our favourite modern mag's first issue had sold out than a copy was up for grabs on ebay (and some of us were left cursing that we hadn't bought an extra copy). ZXF says 'fair dos' to the traders who spotted the opportunity, turning an outlay of £5.99 into a mighty £45 profit in this case. This is the most I've seen one go for so far; plenty more copies have been sold in the £20 - £30 range.



# new UTILITIES




## GAMESBASE ZX

*>New ZX organiser from Paul Thompson*

**Gamebase** is a universal emulator frontend by **James Burrows** intended for use with a variety of formats and available from **www.bu22.com**. **Gamebase ZX**, then, is the ZX Spectrum version, set up and maintained by Paul Thompson, available from **www.worldofspectrum.org/GamebaseZX/** and jolly nice it is too.

A Microsoft Access database at its heart, Gamebase ZX contains information on 500 odd Spectrum titles (each time Paul releases an update, more titles are added), each of which displays in the main window with its loading screen and an in-game screenshot (as in the example above): click on the 'Play Game' button and - provided you actually have the game itself on your hard disk (the Gamebase ZX datafile contains information *about* games, not the games themselves), up pops your favourite emulator with the tape inserted and ready to load.

Gamebase ZX actually recognises titles from the **WoS** archive - and in their zipped up state at that. All you need to do is to point the database at the folder in which they're stored and tell it the location of your chosen emulator. You can also specify paths to inlay scans, instructions and more - which are then made accessible via the 'Extras' button.

What you end up with isn't all that different, functionally speaking, from what you get at WoS (other machines, don't you be forgetting, don't have a WoS); as an offline game browser, however, it's an excellently implemented piece of work.

## BMP2SCR EXP

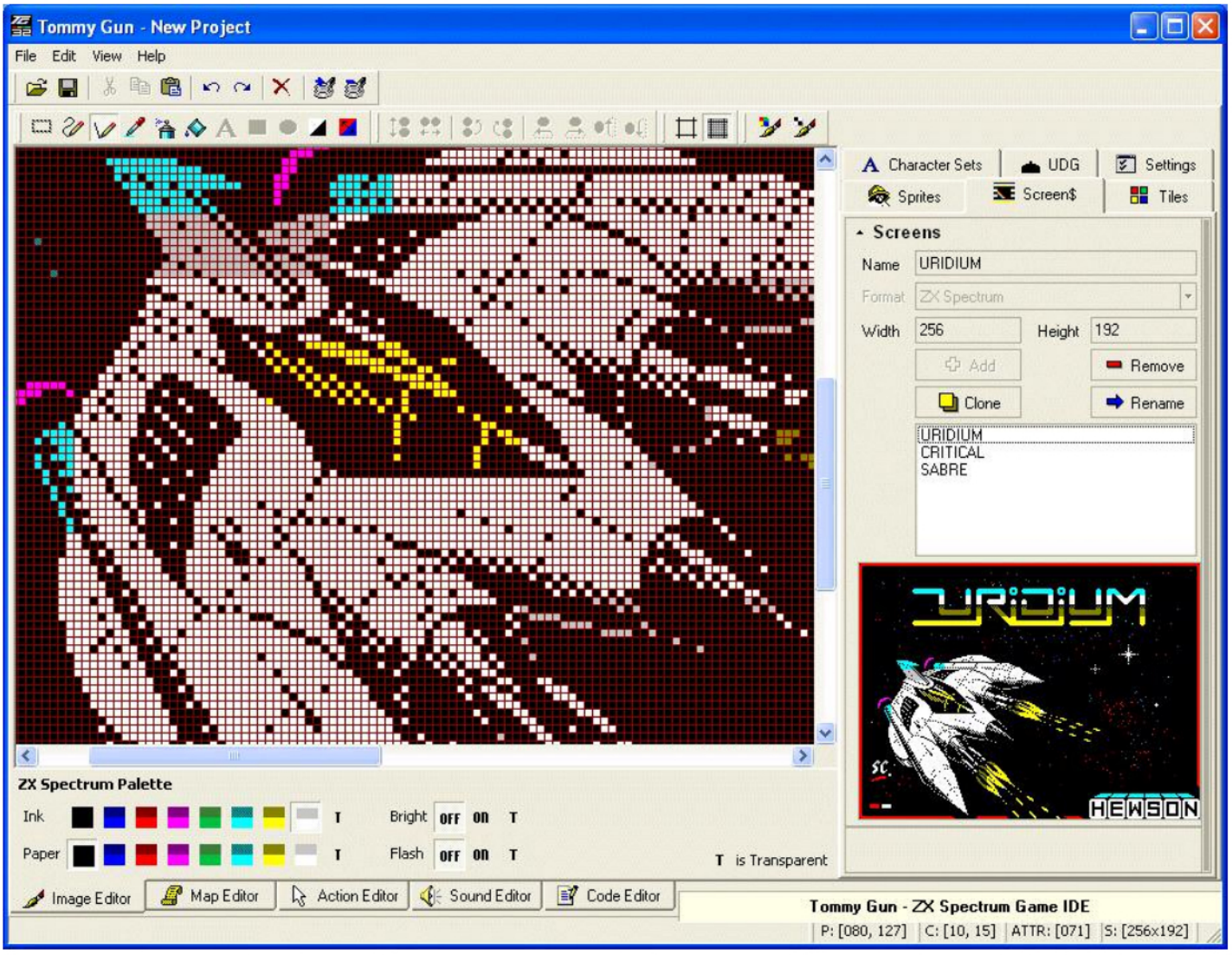
*>Version 2.11a of conversion tool*

The king of the graphics conversion tools has just had an update. Verions 2.11a of Leszek Chmielewski's (aka **LCD**) long- established utility, **BMP2SCR EXP**, is now available from his website at **http://lcd-one.da.ru** and features, amongst other things, new ZX Spectrum conversion modes such as 3x3 diffusion/dispersion cluster dithers, AVI conversion and new conversion modes for the **SAM Coupe**.

BMP2SCR is probably best known for it's ability to convert Windows graphics files into SCR format via a myriad of different algorhythms, but it's worth mentioning also that it has a very competent screen editor built in too, and you can save your completed work out to a .TAP or .TZX file ready to be loaded straight into a real or emulated Spectrum.

BMP2SCR EXP has always been a bit of an intimidating program for lightweights like myself - the number of options for your converted output is simply staggering - although in fairness the program has never really been meant for lightweights. It's worth investing a bit of time in exploration, however, because you can find out quite a bit just by playing around with the various controls and learning about the effects they have. Being able to load your output staight into an emulator is particularly handy for this sort of learning too. There is also, by the way, a fairly detailed manual included as part of the download.

A widely used program, BMP2SCR is to be used next by Hungarian coders **Weird Science Software** for their next release, and its also being explored as a cool visualiser tool for retro-computing concerts in Poland. LCD wants in future versions to add in support for sprite, tile, font and map editing, so there's plenty of expansion planned.




## TOMMY GUN

***>Graphics editor from Tony Thompson turns into games development tool***

The award for the most rapidly developed new utility has to go to **Tony Thompson**; reported last issue as The Spectrum Graphics Suite, this application - now called **Tommy Gun** - has made serious steps towards becoming a fully fledged games development environment and is set to make many more.

The current version at the time of writing is 0.4.0 alpha; it offers a number of image editing features such as screen$ editing (like the Uridium screen above) - which by itself, incidentaly, is a very well implemented tool - sprite editing and tile editing (tiles are those repeated graphics used to make up a screen on a game - like the plants in Sabrewulf - by the way). You can import snapshot files as well as .SCR files, Windows bitmap files, JPEG files and even files created by **Metalbrain**'s excellent **SevenuP.** Yet to be fully implemented are also map editing facilities, an actions editor, sound editor and code editor: pretty much everything a code-competent games designer would need, therefore, and all under one roof. Exciting, eh?

Perhaps the most exciting development is Tony's recent decision to completely re-write the whole lot - turning a single, large program into a plugin based application. Tony told **WoS Forums** that the next version won't look all that different from the current one to the casual user, but underneath the bonnet all the existing features will have been re-implemented as plugins, allowing coders in the future to develop their own compatible plugins - such as a game maker interface for us non-coders, for example.

At the moment the place to go for a download is still the WoS Utilities page, but once plugins start being developed, **TG** might well need a web site of its own. This could well be a very significant application for us wannabes! One to keep an eye on.

# new EMULATORS







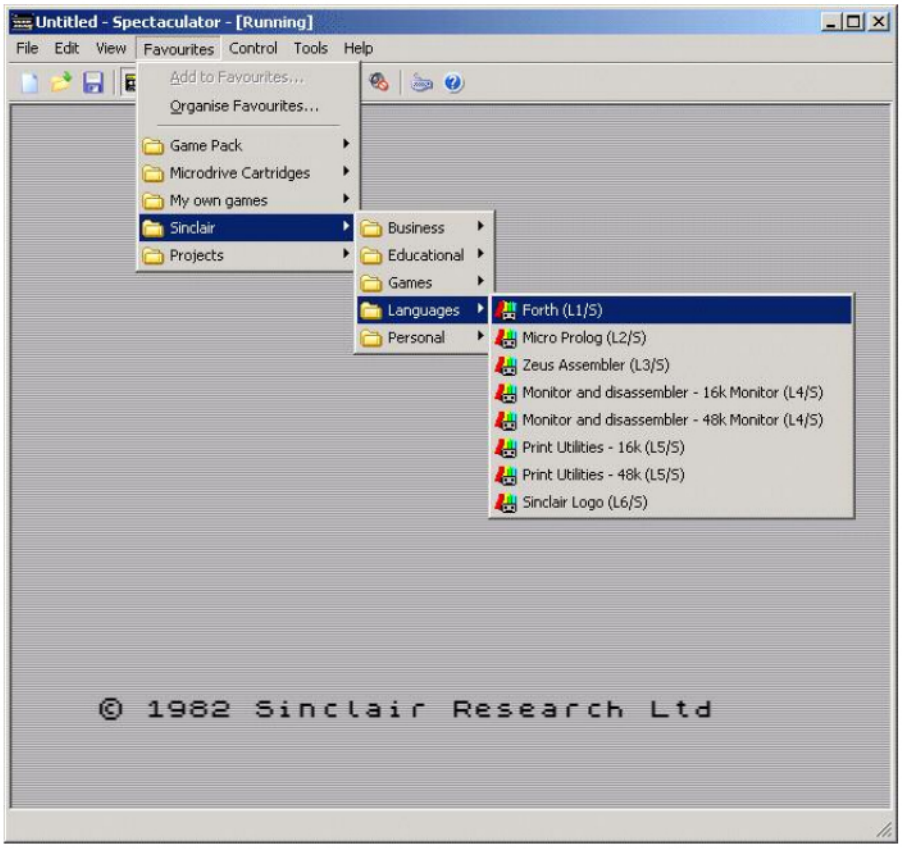
# SpectrumAnyWhere

## Version 1.1 by Juan Cid; www.webcids.com/SpectrumAnyWhere/

How far have we come in the emulation of the Spectrum *experience* (never mind the computer itself) and how far have we yet to go? We've had loading tone generation (interesting one that, since few would regard this as a nostalgic thing any more in these days of TZX file domination), TV screen emulation, *black and white* TV screen emulation, Microdrive motor noise emulation; there's even been talk of *chuntey* emulation (although that would require the perfect emulation of washing machines, vacuum cleaners and at least one local kettle if it was to achieve anything approaching accuracy). **SpectrumAnyWhere** now adds to that proud list *TV Screen Reflection Emulation*. Yes. Look closely at the screen above and you might be able to spot both a window and a bedside table lamp. Very clever, but have we gone too far?

Beyond this, SpectrumAnyWhere is a fairly simple emulator in most respects; offering 48K emulation only it lacks the myriad of bells and whistles we've come now to expect from modern emulators. Although the emulator is quite happy on a PC running most flavours of Windows, however, it has been designed also to run on a PDA and, in that respect, it's something special. But there is one feature which even the dedicated users might appreciate, and that's the percentage progress indicator that runs for each tape block as it loads in (you can see it on the image of the cassette recorder interface above-right, loading in Cascade Cassette 50 [*What you can't hear are the screams of horror - Ed*]). It's a very nice added touch that I'm willing to wager will soon make an appearance elsewhere if last year's feature sharing/swiping (it's not for me to say) amongst the emulator authors is anything to go by.

As a regular emulator user, **Spectaculator** and **SPIN** are likely to remain my personal favourites for the forseeable future, however SpectrumAnyWhere could well be an ideal 'welcome back' emulator for new Spectrum users looking for an uncomplicated program that gets them straight back into loading up their old favourites without any fuss (it could be an ideal PC coverdisk prog). In this respect - and bearing in mind the huge sales of the +2 - it could probably do with adding in 128K emulation; beyond that, however, this is a very well-rounded program.




# Spectaculator

## Version 6.1 by Jonathan Needle; www.spectaculator.com

Since last issue's preview of the first sharware version of Jonathan Needle's excellent emulator, 6.0 has at last hit the virtual shopfront at **www.spectaculator.com.** Quite a stir it's caused too, being the first emulator to make a charge since Gerton Lunter's **Z80.** It is a very good emulator, though. And it's also, of course, Jonathan's choice.

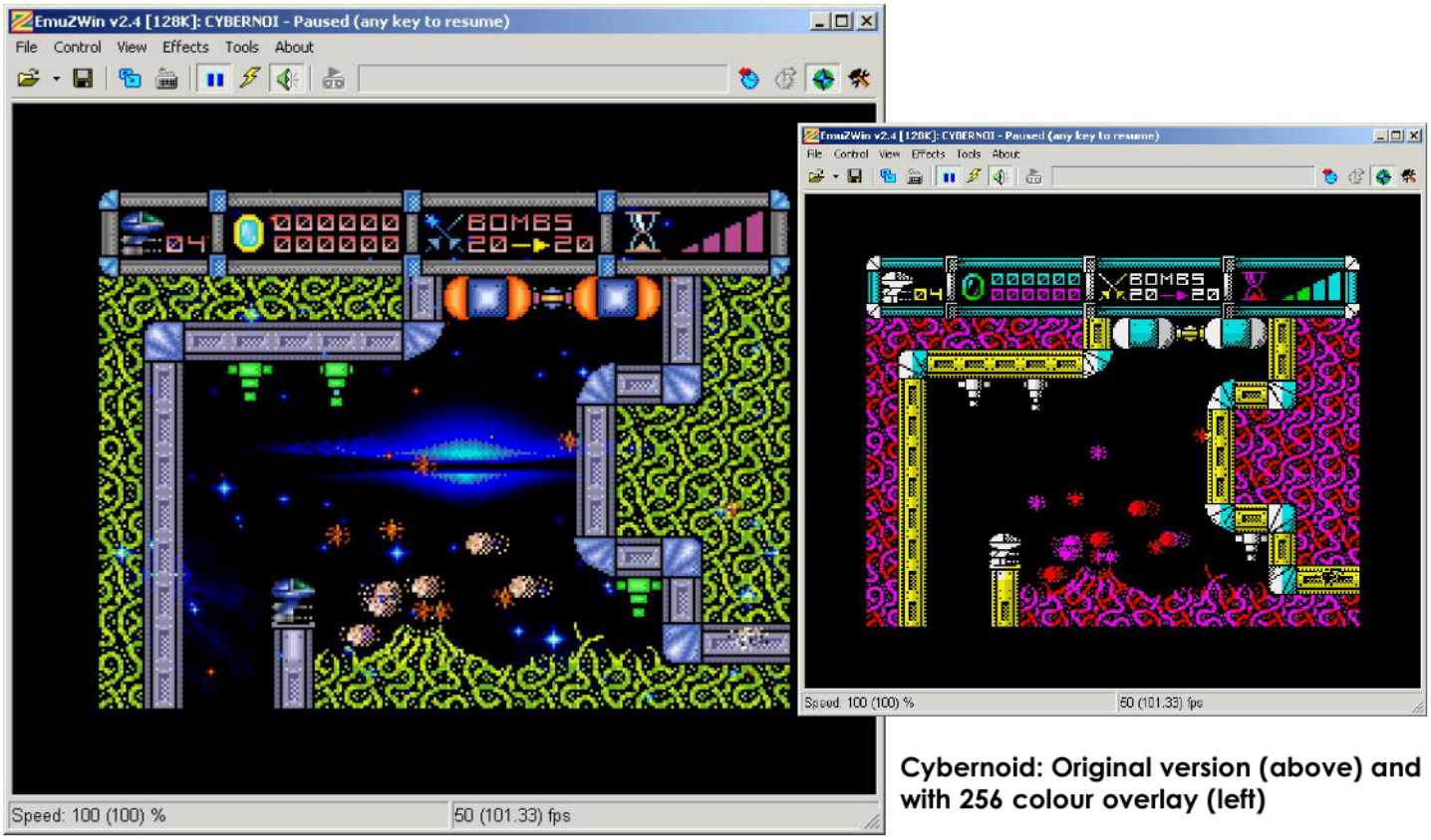
Version 6.1 has now been released, and if you've purchased Spectaculator all subsequent upgrades are free. It's an upgrade of a number of small fixes and enhancements, with a couple of more substantial features. One of these is the ability to record sound output to a wave file.

The other is a favourites menu, and I confess at first to not really seeing this as a particularly exciting addition; but then I started using it to organise some of the programs on my hard drive and boy did I soon change my mind about that one. Perhaps it speaks more about me than it does Spectaculator, but I really enjoyed putting this feature to work; for the investment of a little bit of time it makes switching between different programs a much faster job and it just organises everything so much better. Just like **SpectrumAnyWhere**'s cassette recorder progress indicator, this is a small, simple, how-come-nobody-ever-thought-of-this-before sort of feature that I really hope becomes a standard in future versions of other emulators. Just call me Arnold J Rimmer. Ahem.

The one thing I have felt Spectaculator to be missing previously is keyboard assistance, the keyboard helper in **SPIN** being my yardstick for the sort of help I'm after (sorry, but I just can't handle the business of trying to remember where all the keywords are and the combinations required of getting at them *[you lightweight - Ed]*). Although I mentioned this last issue, it's worth pointing out again the usefulness in this respect of **Geoff Wearmouth's Gosh Wonderful** ROM replacement for the standard 16K ROM (used in 16K and 48K Spectrums). **GW** has done away with all of that choreography in favour of keywords typed letter-by-letter - in much the same fashion as the 128K machine's editor - whilst maintaining compatibility with most existing Spectrum software. It makes the business of typing on an emulated 48K a great deal easier - so much so that I pretty much use it as my default ROM for 16/48K emulation on Spectaculator. It's a simple matter of selecting Tools > Options > Advanced and then clicking on the (None) next to '16K/48K Spectrum' in the Custom ROMs section; locate the GW ROM and select it: you're away.

Spectaculator is now arguably the most comprehensive Windows Spectrum emulator (I'm still discovering things about it - like the ability to send the ZX Printer's output straight to a real printer - superb!) And more is planned; recent hints dropped by Jonathan at WoS forums indicate that the next version will include Plus D emulation - possibly even real disk access, so that you can read and write genuine Plus D disks via your PC's floppy drive. I for one will be delighted if this is the next step in Spectaculator's evolution. It's something that's never been done before in a Windows emulator, and yet, in the UK at least, this was one of the most popular disk formats that enjoyed a very loyal user base. There's loads of PD about for it to - just check out the feature this issue!

# new EMULATORS




**Cybernoid: Original version (above) and with 256 colour overlay (left)**

# EmuZWin

## Version 2.4.1.0 by Vladimir Kladov; http://bonanzas.rinet.ru/e_downloads.htm

Big changes to **EmuZWin** since last issue; don't let the tiny number increment fool you (ZXF06 reported on version 2.2). There are a whole load of differences, for sure, but the two main features are an in-built map creator and 256 colour mode.

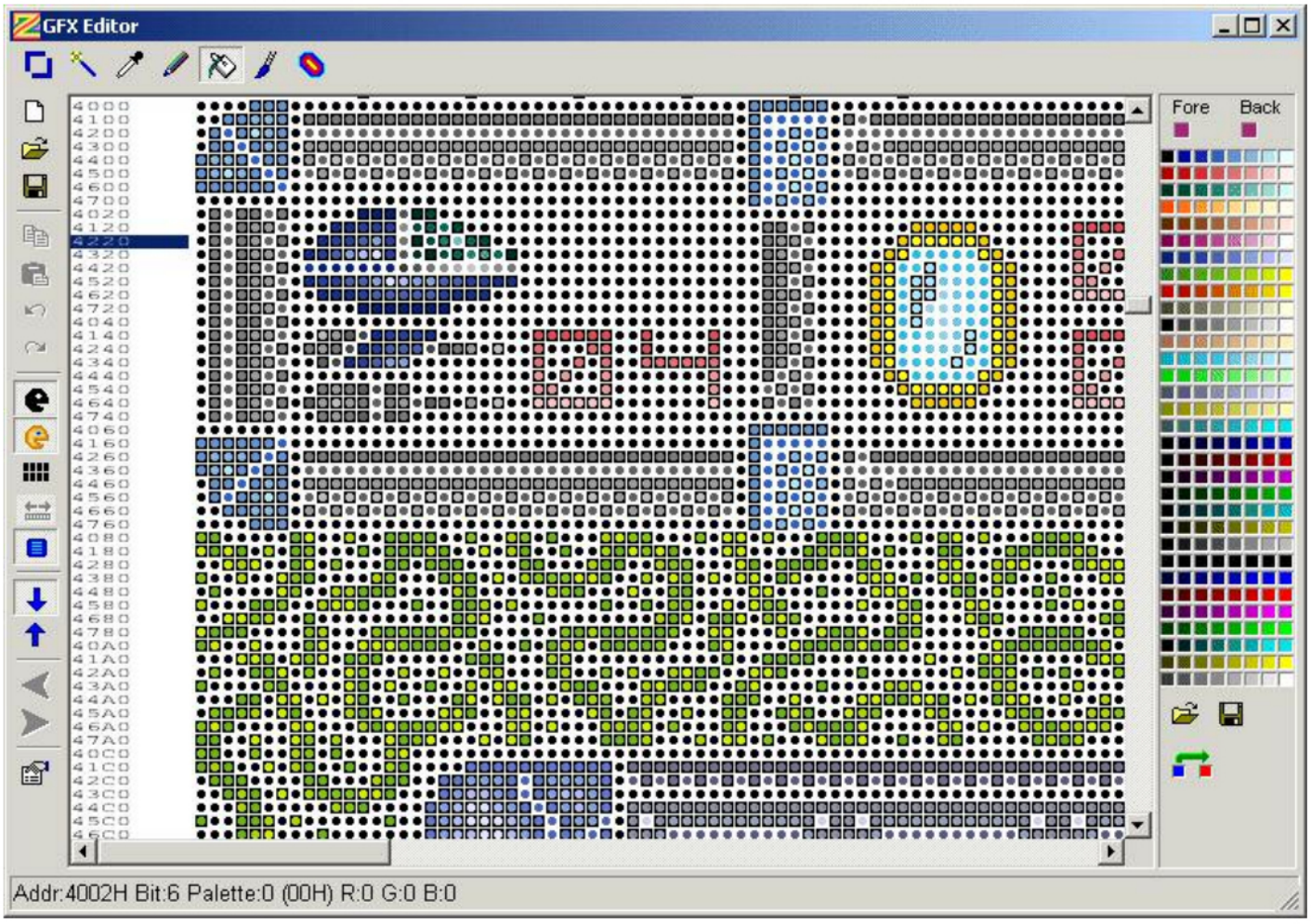
That's right: 256 colours. It all began with an emulator called **Spec256** by **Iñigo Ayo** and **David Goti**; a DOS emulator last updated in 1999. Spec256 added in to its emulation a parallel, graphics dedicated processor (the *Z80_GFX*) capable of allocating a whole eight bits (ie, one byte) per pixel as opposed to the usual one, making available a total of 256 colours. At the Spec256 website (**www.emulatronia.com/emusdaqui/spec256/index-eng.htm**) a small number of games were made (and still are) available which had been modified to make use of this facility, and how we all gawped at them when this first came to light!

But the problem was that the actual business of converting existing games - or, more correctly, designing a 256 colour *overlay* for existing games - was a little on the tricky side for the casual gamer. And so no more got done. The Spec256 authors got fed-up with the lack of enthusiasm and that - as they say - was that (although it *is* still available).

And then in January **q_armando**, in WoS forums, resurrected the idea of the 256 colour emulator. Over the next couple of weeks the discussion was thick and fast, and then stopped all of a sudden when attempts to get in touch with Iñigo and David discovered that they weren't very interested in the thing anymore.

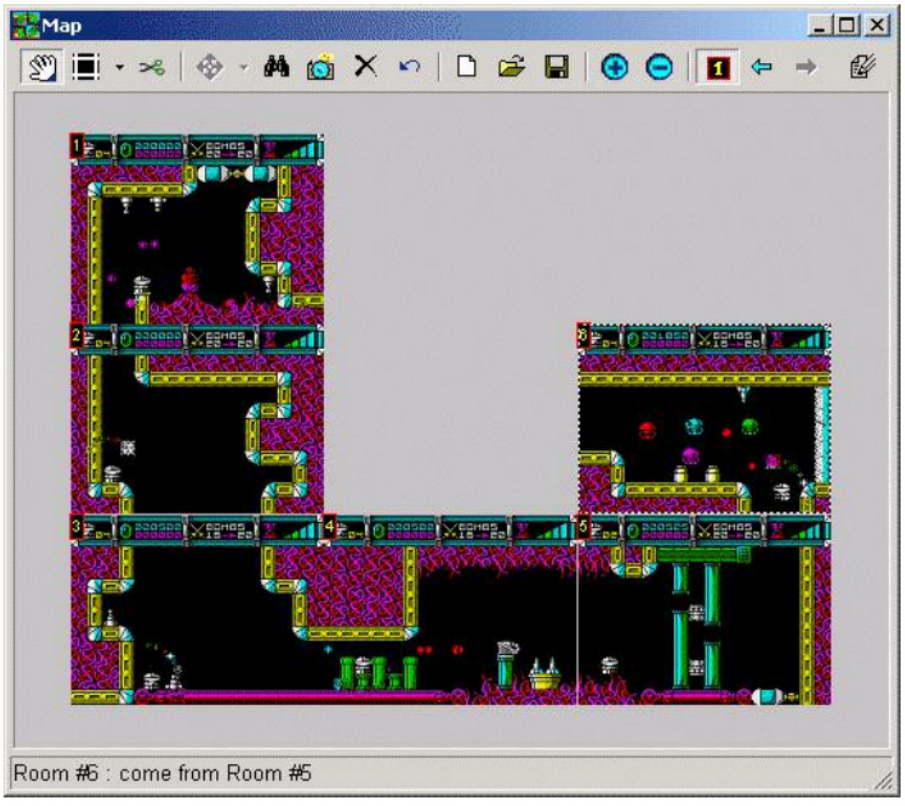
And then **Vladimir Kladov** released version 2.4 of EmuZWin, complete not only with full compatibility for all Spec256 colour-modified games, but a built-in GFX editor to boot, making overlay creation a very considerable deal simpler. And already new 256 colour games are being worked on - check out **www.arjun.150m.com** (Manic Miner with orange trousers; hmmm...).

EmuZWin's other main new feature - the map creator - would by itself have actually made a very satisfactory update (this is the first in-built such tool that I'm aware of), this being a pleasing little feature that makes something I must admit I would previously




**Above: the GFX editor showing the emulated Spectrum's screen memory in 256 colours.**

**Below: the built in mapper adds screens in as you go.**




never have bothered doing quite simple. Vladimir's quick response to the WoS 256 colour thread, however, is nothing short of genius in strategic terms. By studying this discussion and delivering both the product requested and the possible solution to its predecessor's downfall (in the editor), he has potentially catapaulted his emulator to a level of status it might previously have taken a much longer time for it to reach. **Andrew Barker**'s suggestion early on in the thread that a competition could be held to see who can design the best overlay, after all, could only employ one emulator if it happened tomorrow...

Well done for spotting the opportunity Vladimir - I get the feeling now that this will be a serious emulator to watch.

# wibble

*What are you going on about?*

Send your letters, viewpoints, mini articles, etc to **zxf@cwoodcock.co.uk**, with 'wibble' in the subject line.

Last year I was active with CF-cards, see ZXF issue 4. In order to make full use of the capabilities, extra room for a System must be found, i.e. more ROM and RAM. I thought that I did sent you the description, and that you probably found it too 'technical' for ZXF. Which is OK as such. But suddenly I was not sure, and cannot retrieve whether I did send or not.

So attached here the description of my design. Which of course (again) is mainly ment to make people 'move', offering a challenge or an issue to discuss.

I spent a lot of time thinking about a DOS for CF, nothing is ready yet but I passed a difficult point in 'thinking'. In fact I feel that I can start coding as soon as I find the time. Before I start working on a DOS I first spend my free hours on reanimating the extended Basic that I wrote many years ago, and make it fit in my new hardware. And repair a few bugs...

In the last months I spent some 120 hours behind the keyboard of my real Spectrum for this purpose, and think that I am halfways now.... The last feature I implemented there was a command line buffer. Now, when I say LOAD * 16;"myfile" and this results in an error message "File not found", I simply press "Break" (during edit!) and the line returns in the input line, allowing me to change drive 16 into drive 15. Or add "CODE". In fact the same as F3 did under MS-DOS, years ago.

I have not seen this implemented on a Spectrum yet, and feel glad that there still(!!) are 'new' things to do. For some silly reason I feel proud that I am able to 'find' these. Oops, I think I gave away what makes me tick.....

Keep up the good works,

Roelof.

**Thanks for your letter Roelof. I don't think I received your article before, so it's my pleasure to present it below:**

Here is the description of how I upgraded my 48K rubber Spectrum to 64K RAM and 64K EPROM, physically adding only one small extra chip. The result is two banks of 32K RAM and four banks of 16K ROM. The design follows the 'minimal-design' tradition of Sir Uncle, and as usual for a project like this some soldering has to be done....

The diode/resistor solution for addressing the EPROM (see H/N field) can be used in all situations where the standard Sinclair ROM has to be replaced, eg, by Geoff Wearmouth's Gosh Wonderfull system....

Physically upgrading to 64K RAM is done as usual, by replacing the standard 'half defective' 48K RAM chips by normal chips (type 4164) and removing one jumper in the TI/OKI field on the printed circuit board (pcb). Only one jumper remains there, and unless the RAM-chips are Texas Instruments types, this jumper must be in the 'OKI' position. See diagram. For switching between the two banks of 32K a wire connected to 'H' is used.

The original ROM is removed, and replaced by a socket. Here a 64K EPROM can be placed, as this has the same number of pins! In order to address this EPROM, the jumpers in the H/N field on the pcb must be removed, and two diodes and a resistor must be soldered there to the point that leads to p.20 of the EPROM socket. For switching between the four banks of 16K, wires must be connected to pin 1 and pin 27 of the socket, the latter is available at the H/N field, see diagram. Pin 1 is standard "not connected" on the issue 2, 3B, 4A and 6A boards that I possess, and therefore can be used without disconnecting it first. (I expect the same for other boards)

The extra chip I use is a 74LS174 (hex D-flipflop). Computerdata can be 'latched' here in the form of electric signals. The connection with /RESET initializes all flipflop outputs to 0V when starting the computer. As shown I only use four outputs, and these are controlled in an unusual way. The state of A0,1,2, and 4 is clocked in by every IN command to an IO-port in which (binairy) address A3 holds zero. The exlusive use of the A3 address line was allocated by Sinclair to its IF1 and microdrive, so the circuit as given is not compatible with those. But of course another address line can be chosen. The reason for using the IN command instead of the more usual OUT is that I expect less compatibility problems. The only drawback is that in machine code the A-register must be saved when swapping banks.

After an IN command with A4 high, addressing the LS174 becomes impossible until a hardware reset is done. This lock-feature gives the opportunity to use the Spectrum in all normal ways, when a ROM ban is locked that holds a copy of the standard ROM.

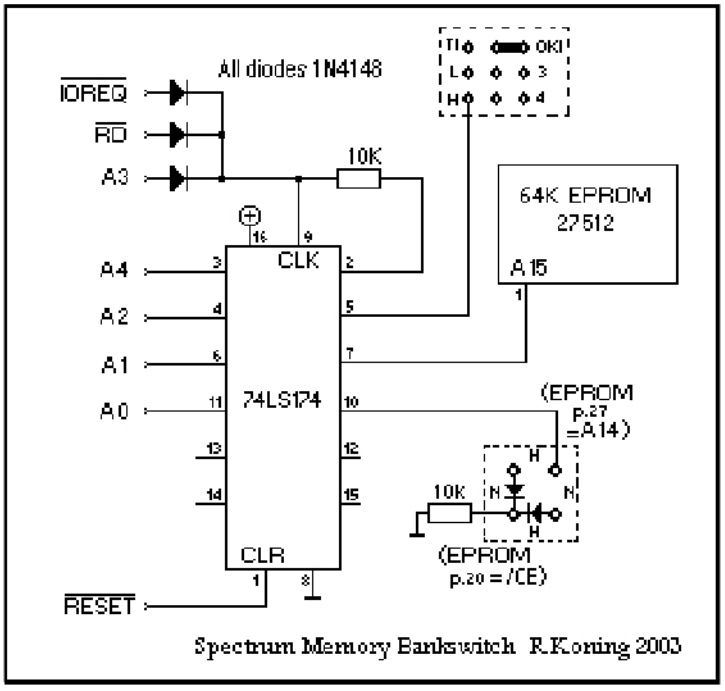
The four EPROM banks of 16K each are paged in at the normal ROM location, 0 - 16K. The two RAM banks of 32K each are paged in at 32768 -65535.

The diagram as given here results in the following IN commands:

```
-------------------------
IN 224   + 0      EPROM bank 0 ,  RAM bank 0
         + 1      EPROM bank 1 ,  RAM bank 0
         + 2      EPROM bank 2 ,  RAM bank 0
         + 3      EPROM bank 3 ,  RAM bank 0
-------------------------
         + 4      EPROM bank 0 ,  RAM bank 1
         + 5      EPROM bank 1 ,  RAM bank 1
         + 6      EPROM bank 2 ,  RAM bank 1
         + 7      EPROM bank 3 ,  RAM bank 1
-------------------------
IN 240   +0,1,2,3,4,5,6,7  :  As above, but with memory lock.
```

I designed this circuit for having the possibility to store a DOS for my FlashDisk in an 48K Spectrum. I therefore kept things as simple as possible, as there really is little room inside a rubber 48K. The LS174 was on its back glued onto the 8 diodes close to the keyboard connector, and the pins bent sideways. By using a multimeter and the known connections of the Z80, I could find all points to make connections to at the upper side of the board.

I expect to use the extra RAM bank only for System an DOS purposes, storing all kinds of temporarely tables like (maybe) channels.




Take a look at http://zxm.speccy.cz it is the biggest CZ/SK speccy magazine (in pdf) and you can find a lot of interesting information there!

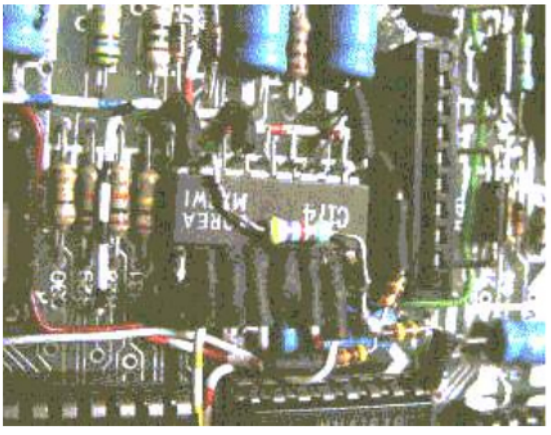
For example about DivIDE interface with CF card reader, much chepaer than your british ZXCF and much more universal... I only starting to think that you the other world simply doesn't know about the cool hardware which is produced in the middle of Europec...

Factor6/Ay-Riders




**Thanks for the link - this is a very well-produced PDF magazine indeed - one of the best I've seen so far - although I'm afraid to say I'm completely unable to read it. My loss, I believe (perhaps someone would like to review it for ZXF?)**

**The ZXCF interfeace, by the way, is a Swedish project - not British - by Spectrum DIY guru Sami Vehmaa.**



Febr. 2004, Roelof.Koning@12move.nl

load

# Fire and Ice

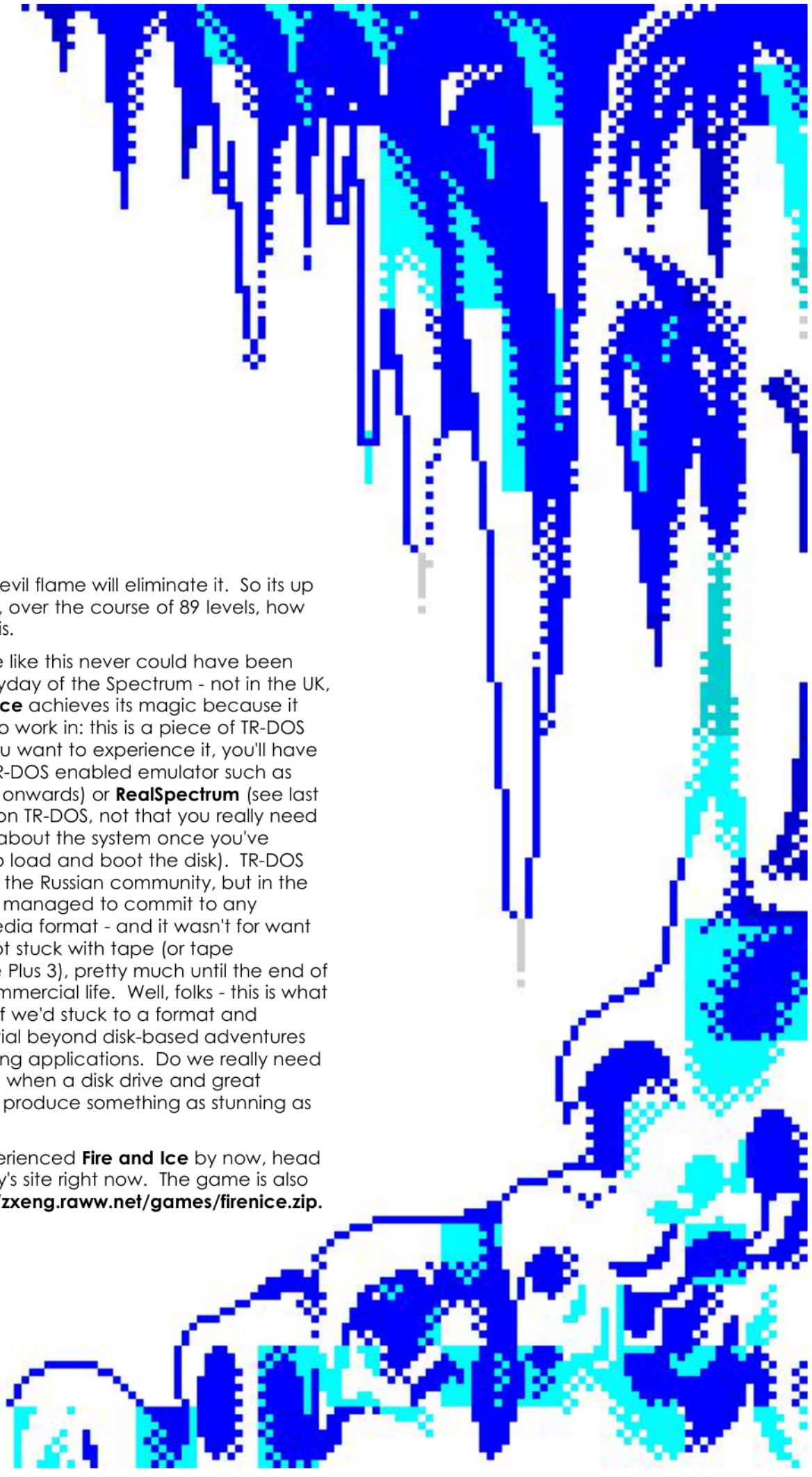
Author: **n-Discovery Group** Price: **Free** Reviewer: **Colin Woodcock**
Website: **www.n-discovery.narod.ru/games.htm**

Let's put this simply: if **Fire and Ice** had been released in the late eighties, the ZX press would have gone mad about it. And rightly so. **n-Discovery** have produced here, as someone very appropriately termed it in the **WoS** forums, a masterpiece. They have got *everything* right. Everything.

**Fire and Ice** is not so much a game as it is a production; every last screen that passes in front of you, every last audio track (and there are plenty) is crafted with exceptional skill. Even the language is perfect: as soon as the game loads up you can choose between English and Russian; I can't speak for the Russian version, of course, but the English text is almost poetic in its construction - a far cry from the broken translations we often experience, noble though those efforts are.

Very clever use of interlacing is used in many parts of the game, including colour mixing in the credits to give a palette of pastel hues and an extremely subtle effect right at the start, where the black text of the n-Discovery logo is interlaced with a slightly fatter version of itself to create a shimmering, anti-aliased feel. Like I said, *every* aspect of this title is polished. There's even a very detailed help section where information about the game is presented as a comic-strip discussion - and in this there's even a fast forward option!

And the game itself is simple, beautifully presented and utterly, utterly addictive. Your task is to guide novice wizard Dana in her mission to extinguish the flames sent by evil wizard Druidle to melt the peaceful Coolmint Island away. Dana has been empowered with Ice Magic by the queen of the Winter Fairies and can thus create or destroy ice below her; sliding or dropping an



ice block onto an evil flame will eliminate it. So its up to you to work out, over the course of 89 levels, how best to achieve this.

Of course, a game like this never could have been released in the heyday of the Spectrum - not in the UK, at least. **Fire and Ice** achieves its magic because it has lots of space to work in: this is a piece of TR-DOS software, and if you want to experience it, you'll have to get yourself a TR-DOS enabled emulator such as **Spectaculator** (6.0 onwards) or **RealSpectrum** (see last issue for a tutorial on TR-DOS, not that you really need to know anything about the system once you've worked out how to load and boot the disk). TR-DOS was embraced by the Russian community, but in the UK we never quite managed to commit to any particular mass media format - and it wasn't for want of choice - and got stuck with tape (or tape conversions on the Plus 3), pretty much until the end of the Spectrum's commercial life. Well, folks - this is what could have been if we'd stuck to a format and explored its potential beyond disk-based adventures and word processing applications. Do we really need a 'Super Spectrum' when a disk drive and great programming can produce something as stunning as this?

If you haven't experienced **Fire and Ice** by now, head over to n-Discovery's site right now. The game is also available at **http://zxeng.raww.net/games/firenice.zip.**

Load

# Fun Park

Author: **Jonathan Cauldwell (Published by Cronosoft)** Price: **£1.99** Website: **www.cronosoft.co.uk**

Reviewer: **Kevin Bennet**

Theme park was written by Bullfrog software back in the days of the Commodore Amiga, Megadrive and 486 PCs. The game has always had a simpli-city amongst other god sims and environement games and although reworked and added to never quite emulated.

**Jonathan Cauldwell**

Then... sqQueesed into 4K of Spectrum RAM by Jonathan Cauldwell for the 2003 Minigame competition (Amusement Park4000) was it an act of slough, layness or genious... or of genious sloth to maximise the game for 16K of RAM with the new name of Fun Park? [1] Considering the 16Bit home computer and PC versions being so defined and sophisticated some may ask or ponder what you could genuinely do with 16K to achieve the basic playability & durability of the simple mechanics/ design? (The 4K version was awarded silver in the competition, highest Spectrum winner.)

It is excellent to see the Minigame version being developed as I hoped this would be the case due the potential shown in 1 and 4K of RAM within the competition enteries. To put the brain stretching idea into context you have a large environment game with graphics and constant variable data and gameplay that redefined the genre... and the might of the Z80 processor and 16K of RAM (also it's a chilly day and raining/ hailing ouside.... always something to do with environment control.) If the game plays and works as we would expect from a sim then Mr Cauldwell should be glazed in honey and have the bees set loose... naughty... naughty spank spank.

**Cronosoft. [www.cronosoft.co.uk]**

The game is supplied with and through Cronosoft on cassette or as an email .tap file for emulation. This is an excellent idea as it is self marketing for the Spectrum and its continuing as well as a really effective Windows runtime that can be running in the background. [2] The artwork of the Cronosoft inlay and the progression of the coordination of the artistry of their business is incresingly evident with this title and I am looking most forward to receiving my copy on .

After loading the game the

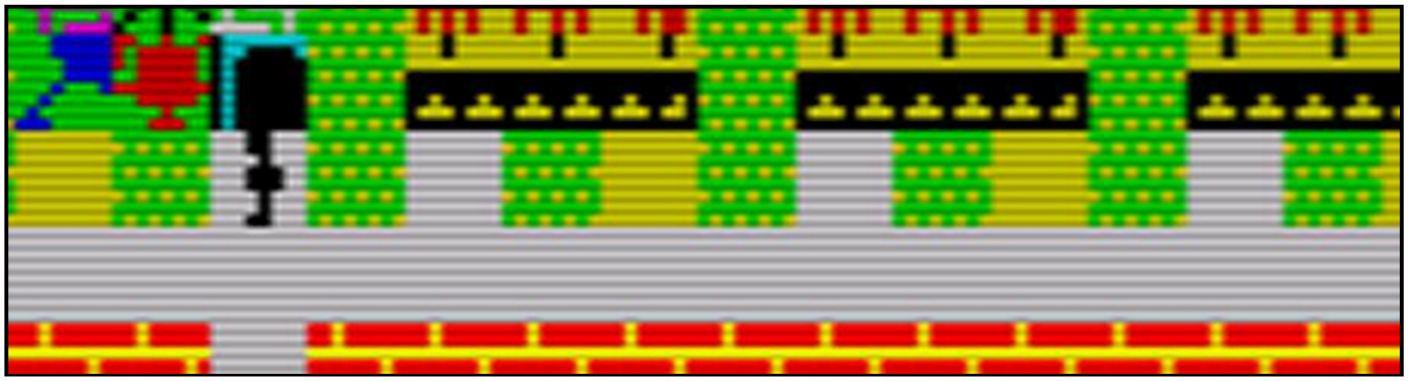



Spectrum presents a nice loading screen and goes to an intorduction screen showing (c) Jonathan Cauldwell 2004 and a polite scrolly. Here I thank Jonathan for his nod for my efforts in small support. Thankyou for the nod Jonathan. I am of course convinced that the scrolling colour border is nicked right from the Micromega classic 'A Day in the life'

**An idea of the game and play**

The game screen presents a green field with the front wall and an entrance. The manual explains the game keys, the usual QAOP/ M and SPACE with number keys for building and finance/ options. The green field is soon left behind with the building game characturistics as you define your Park and the rides, ticket prices and investments such as research (for new rides and decore) security etc. and aim to keep the little people happy. Try and resist the overspend and the loan as new and intruiging rides appear form your research department, and the challenge of clawing out of debt. Pump those little people for their cash ...hehehehe, and watch them run away...sniff boo hooo...

The author promises much deborched behavour with pubs, ride deaths and the need for security, all in good mini-ised pixel fun with every polite and cuddly assurance for those of a sQuuemish disposition. ... A while after making some good money from my park I have boosted research to the max of 99 and invented the park bench! I wander what colour it is and whether there are signs warning of the recent painting. Will have to wait until the money is rolling in before I can play with the go-



karts. Of course I willl tell you no more of the toys to be found after a number of hours play, that has to be part of the fun of discovery. If I find the cassette inlay tells all then I will look like a loony :o)

[I have discovered that the screen scrolls left to right giving a load more space to build just when you thought it was looking nicley packed.]

The unrully behaviour has begun... oh that's got to have hurt! Also, it is worth noting that sometimes you can't build too near the edge of the screen as it stops you adding pathways or that interesting very long go-kart track. A general suggestion is to try and leave a couple of squares blank space before you build a structure. Oh... the promise of more interesting rides, some looking tall and dangerous... hehehehe. The ever looming temptation of the loan...

[A word on park design, you have to observe the size of objects like the trees as spaces left must be left, you can't overlap graphics as we are in the environment of 16K, all very progressive, and has kept me at my PC for a number of hours...]

Does your park deserve the ticket price? The customers vote with their numbers and their feet, as your park grows you will want to try and increase the monies you can invest. Experiment with park layout, I try and keep bends and corners simple...

[Ahhh... Park security....The death toll has got out of hand. I think I must invest in more security immediatly!!! AAAHHHHHH]

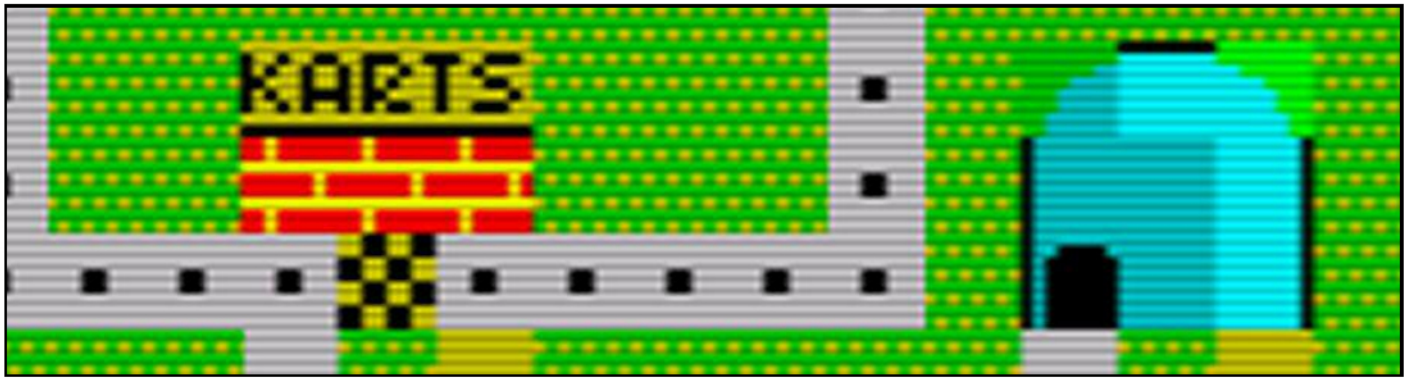
**My conclusions (Should Mr. Cauldwell be glazed in honey?)**

Well, YES!

I have a number of 16K games such as Horace, Jetpac and Sir Lancealot to name a couople. It is impressive to see what could be done with so little resources. FunPark's graphics are small and well defined with amusing characturistics with functional and interesting symbols. Before you know it you have a park set up and running.

The game is very playable and draws you into its block graphic world of lower resolution, in fact it's a game that shows impressive 16K programing for a few quid and those of us who got snoby in 48/ 128K days will sit back and forget all that after we have played a few times. One of the most sucessul early games was called Kingdom on early research machines with nothing much more then very low resolution graphics. Playability from small code within an environment that you partly create your selves, on screen and in your mind.

So... I say invest your few quid not only in the game, but also in the development of the artisan, partly known as Cronosoft.




*[1] As a progression Jonathan's work and its future potential is very interesting as the core of his techniques are being partly defined at a level of absolute maximisation of resources.*

*[2] I use the ZX32 emulator with the 'pause option...' not selected (on the general screen of the control panel of the emulator) this then allows the game to tick along in the background whilst doing other things...."me Sir...eerrr no sir... it was not me squeeling in delight whilst playing a game sirr.... nooooooo sirr... noooo...."*

Load

# Blink

Author: **Colin Woodcock (Published by ZXIF)** Price: **£1.99** Website: **www.zxf.cjb.net**

Reviewer: **James Zeun**

***Editor's note:*** *James contacted ZXF wanting to review an adventure game and I offered him the challenge of writing a review for* ***Blink!*** *For those of you who aren't aware, Blink is the first title to be published by* ***ZXIF****, ZXF's very own software label. You can play the game online for free at* ***www.zxf.cjb.net*** *or pay £1.99 to receive the game on a shiny new cassette.* ***CW***

So there you are out for the day, browsing round a souvenir shop. When the most unexpected and unfortunate thing happens whist picking out a gift for dear old mum. Time decides to stop, and Bart the bald, middle aged engineer recruits you to help him. Confused? You will be.

From this point on, your are thrown in to the strange and confusing adventure known as *Blink*. A time-stop story, filled with enough jokes and humor to put a smirk on an undertaker.

Being as its 2003 and *Blink* is a text only adventure game designed to run on 48K, one might think the developer of *Blink* is either insane or knows something we don't.

Developed using PAW (Professional Adventure Writer...That's a mouthful eh Ed?), the game operates via a set of predefined key words. These include, NORTH, SOUTH,GET, DOWN, EAT, CLIMB ect. This might seem complicated and slightly intimidating for beginners. But for seasoned adventurers the system will be more then familiar.

In most cases all one needs is a good amount of common sense. To tell the game what it is you want to do. However at times the game can get frustrating. This is often when your objective is clear. But how you tell the computer what to do isn't.

As I said before this problem will most likely only apply to beginners. People who are not fully versed in the common commands used in text adventure games.

*BLINK* is without doubt worth the money and a worthy addition to anyone's collection. If you've never tried a text adventure game. Then you couldn't go far wrong with trying this game.




```
>LOOK
SARAH'S SOUVENIRS
A Cornish souvenir shop. Frozen in time. No really. Everything is
still. Everyone is frozen. It's like musical statues done bizarre
Cornish holiay style. A woman over here is gazing in fixed appre-
ciation at a crystal dragon and her partner is stuck sneaking a
glance at his unticking watch. A kid over there is tugging at his
father's shirt sleeve with one hand and pointing out the latest in
hollow plastic ball projectile technology with the other. An ice
cream scoop hovers mid-way between an unattended cone and a
pastel-pink floor tile. Everything is stopped. Except me.
```

***Fancy getting your adventure game published with ZXIF?*** *We can make absolutely no promises about money - Spectrum adventure games are a minority interest within a minority interest - but you will get to see your game presented professionally, and it should even get an entry on WoS! If you have a previously unreleased piece of Spectrum Interactive Fiction and would like to see it released under the ZXIF label, just drop us a line at zxif@cwoodcock.co.uk.*

# TV Game

Author: **Weird Science Software** Price: **£1.99** Website: **http://wss.sinclair.hu/**

Reviewer: **Colin Woodcock**

**Weird Science Software**, in case you'd forgotten, are the team behind last year's **Flash Beer Trilogy**, a great little puzzle game of three parts that still has me scratching my head. You can now download all three parts from the **WSS** website for free, by the way, as well as ordering the trilogy on cassette for the measley sum of £2.99.

**TV Game** is the latest release from **WSS,** also available as a free download with the option to purchase a cassette copy for £1.99. It's not even slightly like **FB**. It is, basically, **Pong**. For the Spectrum. But with a twist.

The twist is exceptionally clever - something I've never seen done before on the Spectrum. The clue is in the screenshot from the game beneath this writing: where the text of this column begins is right at the very edge of the normal Spectrum screen. That's right - the 'bat' (which is multicolour, by the way - look closely and you'll see there's no way that colour placement could be done with only two colours per character) is actually outside the normal screen, moving up and down, in fact, in the border.

Depending on your degree of ZX general knowledge, you'll either cry 'That's impossible,' and jump out of the window in hysterics or you'll nod with a knowing smile. In fact we've seen border effects plenty of times before, the most famous, perhaps, being the set of handle bars on the high score table in **Paperboy**. We've seen moving border effects too - a message that scrolls past in the border in big, bulky letters springs to mind, but I can't recall the program it was from. But we haven't - to the best of my knowledge - seen moving, *controllable* ***and*** *multicolour* border effects before.

Coming during a time of retro TV joysticks, **TVG** is clever in its irony as well as its technical prowess! The game itself offers options aplenty: you can chose between single and double bats, large and small bats, slow or fast moving balls and more. You can play by yourself against the Spectrum or against a human opponent - let's face it, the latter is how this sort of game is best enjoyed these days.

Because of its precise timings, **TVG** makes rather large demands of emulators. It only works on some, the three recommendations being RealSpec, SpecEmu and Spectaculator And then only using realtime loading; but that way you get to see some rather snazzy loading effects too. Very clever.




**So how did they achieve that border effect?**

It's all done with machine code, of course. My very (*very*) limited understanding of the process is that the beam scanning the TV screen can be manipulated so many times per second by the CPU, the fastest possible change equalling a horizontal line so many pixels long. Stitch enough of these lines together and - hey presto - you've got an image of sorts. But it's a very CPU intensive process, leaving little left over, which is why it tends to be used whilst nothing else is going on in the game (eg, high score tables). By choosing such a simple game as Pong, however, and by doing away with sound also, WSS have pulled it off. In-game, controllable border movement. Respect!

# SPECTRUM +3 SOFTWARE AND SPARES




**HARDWARE:**

**3 inch 180K disc drive for +3.** Reconditioned with 3 months warranty £10 each. These drives can be supplied with cream coloured facias in place of the black facias if wanted -- just ask.

**Belts for the 3 inch drive** £1 each. New. Loads available. (Just send a S.A.E. with order to cover postage -- correct for up to 20 belts).

**Monitor lead** to convert +3, +2 and +2A to use an Amstrad CTM644 colour monitor. £4 each.

**3 INCH DISCS:**

**3 inch Blank discs:** Second-hand good quality Amsoft or Maxell only supplied. All have been reformatted, verfied and relabelled. 80 pence each or £7-50 for ten. Larger quantities available 100 for £65, 1000 for £450.

Sometimes available new 3 inch discs at £1 each, please ask.

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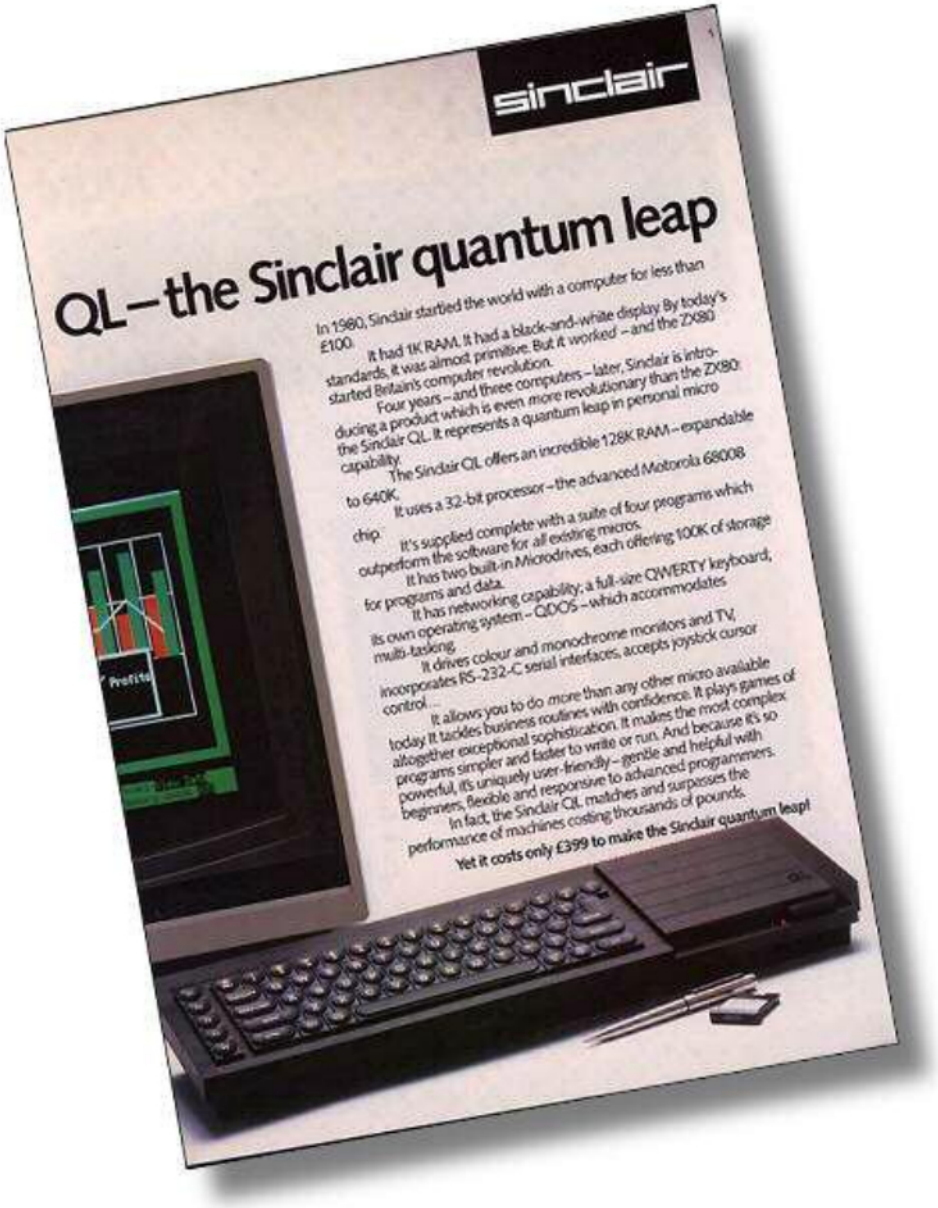
# RETROSPECTIVE... 1984

Matthew Harrodine continues his look at the golden years.

Welcome to another trip down memory lane where the Sinclair story has reached 1984. This pivotal year in Sinclair's history was both the peak of activity and the beginning of a trough from which the company would never escape...

**1984's ZX83...**

Sir. Clive Sinclair is quite well known for his relative disdain towards computer games and Sinclair Research always tried hard to push the "serious" side of Spectrum computing. Sadly for Sir. Clive, the Spectrum (for the vast majority) was just another home entertainment system with games the mainstay of its success. Sinclair was aching to break the business and supposed 'serious' user market and was still desperate for the BBC contract that was coming up for renewal. So, in January to the surprise of the waiting world, the Sinclair QL was released; well, sort of! The hopes and dreams of Sinclair Research were reliant on its success. For that reason it is surprising that at the time of its 'release' there probably did not exist a working machine. Yet, in the midst of a classic Sinclair propoganda exercise it was promised for delivery in 28 days. The expectant public was made to wait until March at least before getting their hands on one. There had been many rumours regarding ZX83, the codename for the machine. Maybe it was to have a built in screen? Maybe it was to run on batteries? Maybe it was a portable? Or maybe not. It would seem that what actually happened in January is what we might call a feature freeze as the machine did not have any of the rumoured features!




On paper the QL looked promising, with a 32 bit processor running at 7.5Mhz and operating system support for multitasking and windows. It was to have a proper full-travel keyboard along with 128Kb of RAM, basic networking and RS232 communications. There was also a bundled office suite written by Psion Software comprising Quill (wordprocessing), Abacus (spreadsheets), Easel (charts and graphics) and Archive (database). It was a pretty comprehensive office computer in one box and appeared to be a very sophisticated machine for your £399.95. Much was made of it being another Sinclair "first", namely the world's first sub-£400 32

bit computer. Indeed, for the money these were impressive features but they weren't quite what they seemed.

The Motorola 68008 wasn't a true 32 bit processor, the multitasking was simple and the windows were fixed tiles with no overlapping. The supposed full travel keyboard wasn't popular either, being merely plastic keys over a rubber membrane. Reliability issues with the twin built-in microdrives were caused by cramming 100Kb onto a cartridge; remember that ZX Microdrives held 85Kb and weren't perfect at that! Add to that the fact that Psion's software needed to make lots of use of the microdrives and it was a recipe for disaster. The very first QL's held part (or all, there are conflicting stories) of the ROM in a box or dongle outside the machine connected to the ROM port. Sinclair's official excuse? The original ROM wasn't big enough for all the juicy features! Unofficially, it may have been because Sinclair had the boards manufactured before the ROM was finalised. This was further evidence that the launch was rushed.

Just one month later, Amstrad launched the CPC464 which for just £30 more could be had with a dedicated colour monitor and a proper disc drive. The CPC made equal inroads as a games and business machine thanks to its bundled CP/M operating system, 24 colour pallette and true 80 column text mode. The CPC is the machine Sinclair Research should have created and I feel that this is only reinforced by Amstrad's "bargain" buy out later in the decade.

**The ZX81 won't die...**

Sinclair's original blockbuster, the ubiquitous ZX81 was still around and selling well. Rumours that it was due to be canned were seemingly true but by February Sinclair had changed its mind; the machine just kept on selling. Except of course in the USA where by the time May had rolled around, Sinclair's licensee Timex had announced that it was giving up on the computer market altogether. Timex bosses correctly predicted market saturation and difficult times ahead for the microcomputer industry.

**A makeover for the Spectrum...**

The Spectrum+ was launched late in 1984 and although it wasn't really a new machine it helped to rejuvinate Spectrum sales, especially for the all important Christmas period. Quite simply, the Spectrum+ was a standard 48Kb Spectrum in a different box with a QL-a-like keyboard. It cost £179.95 while the original rubber keyed Spectrum remained available at £129.95. In fact, people could even buy just the box (£50 for the privilege!) and recase their existing Spectrum. Sinclair never missed a trick.

It is disappointing that, with all of Sinclair's attention turned towards the QL, no new technology or real improvement was available or was made with the Spectrum+. There were no new Sinclair peripherals announced for the Spectrum during 1984 and in fact some, like the ZX Printer, were shelved. Sinclair was neglecting the core of its business.

The early Spectrum+ keyboards had a tendency to fall apart as Sinclair skimped on the thickness of the plastic and the strength of the glue. More bad publicity ensued and retailers reported that anything up to 30% of Spectrum+ computers sold were returned because they were faulty. Sinclair stated this was due, in part, to "inexperienced first time users". A little unfair maybe? To compound things, the Spectrum+ used the Spectrum Issue 3 board which had been the subject of criticism earlier in the year for introducing software incompatibility. Yet more bad publicity but on this occasion, Sinclair's defence was valid; software producers had been making assumptions about undocumented aspects of the firmware.

In May, Sinclair struck a deal with Samsung Electronics of Korea to manufacture and sell the Spectrum in the region. This was only one of many licenses granted for manufacture, assembly or sale of the Spectrum overseas but as an event, this deal stands out. Clearly, and perhaps unsurprisingly, Samsung's quality control was much better and it wasn't long before Sinclair halted UK production and began retailing the Korean Spectrums in the UK. Turn over your Spectrum or Spectrum+ and have a look - can you see a Samsung stamp on the base?

**Software...**

Although I said in retroSpective 1983 that I knew of few or no Spectrum cartridges I was proved wrong. And not just by the picture of many cartridges that appeared alongside the last installment! February 1984 saw the launch of further ROM based titles for the Interface 2. These included the classic 'Jetpac' by Ulitmate.

Generally though, third party software houses were beginning to have a tough time of it. In May, Spectrum stalwart Imagine Software cut prices of its software titles to £3.95 each. This was probably a desperate bid to improve sales. The following month, after threats from dealers to stop stocking Imagine software altogether, they were forced to put their prices back up to £5.50. By September Imagine was gone - dissolved by court order and inviting the attention of the fraud squad although no charges were ever brought. Rabbit Software, most famous for their 'Race Fun' title, was also liquidated. On a more positive note, BT entered the fray with its own Firebird label offering some pretty decent titles




for only £2.50 and Virgin reaffirmed its commitment to improving quality in the Spectrum and Commodore markets.

**Writing on the wall...**

In the start of a trend from which Sinclair Research would never recover, it was announced in December that profits had fallen from the previous year. Sinclair was doing better then some, notably Dragon Data and Camputers who were in receivership and liquidation respectively but then Sinclair was the market leader and had the most dealers. Sinclair was selling a higher volume of machines and had a higher turnover as a result but the QL had been the first nail in the coffin. The strategy was cynical, to launch the machine early and attempt to boost end of year figures accordingly. At the core of its organisation, Sinclair Research must have known that something was not quite right as early as late 1983. They were tring to rectify it. The tactic had backfired, with the QL irreperably damaging Sinclair's reputation and inviting scathing criticism from the press. Serious stuff for the company that could do no wrong only six months previously. Sinclair was plowing even more money into well meaning but possibly over ambitious projects such as developing the disastrous C5 electric vehicle. Teething trouble with the keyboard on the 'new' Spectrum+ cannot have helped customer confidence.

The writing was on the wall. Sinclair staff were hardly ever less than optimistic about the future in public but in their hearts they must have acknowledged the beginning of the end.

*1985 will be covered in ZXF08...*

www.museummc.org.uk

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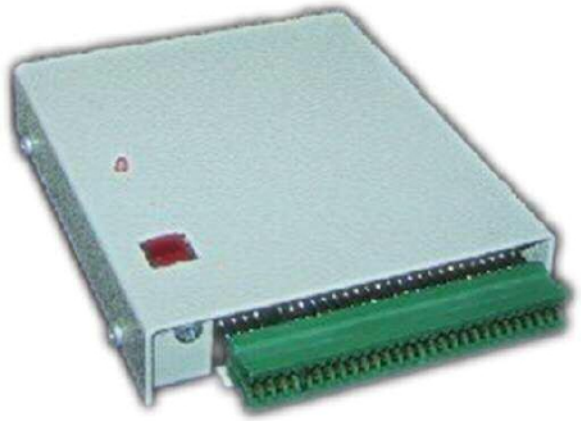
Permission granted to Colin Woodcock / ZXF Magazine for publication.

# ROUGH GUIDE TO THE PLUS D

**As ZXF07 is being written, Jonathan Needle is working on Plus D support for the next version of Spectaculator. Just in case you're wandering what all the fuss is about, here are a few bits of information for you...**

## SO WHAT'S A PLUS D THEN?

Released in 1988 by **Miles Gordon Technology (MGT)**, the Plus D was a disk interface that allowed you to connect to your Spectrum pretty much any of the standard disk drives of the day. The interface was the successor by about two years to MGT's magnificent **Disciple** interface (a rival to the **Sinclair Interface 1** which sat underneath the Spectrum - just like the IF1 - and also could connect to most standard disk drives as well as boasting ZX Net compatibility) and included also a 'magic' snapshot button and a parallel printer interface. It was compatible with most software designed for the Disciple and - due to the Disciple's own heritage - ZX microdrives. The original Plus D was black; the interface was later bought up by **Datel** and re-clad in a beige case (pictured right).






## WHAT'S SO SPECIAL ABOUT IT?

The Plus D was more than just another disk interface. The functionailty of a Spectrum 128/+2 fitted with a Plus D system (interface and disk drive) far exceeded the functionality offered by the other main upgrade route for Spectrum owners at the time - the Spectrum +3. And upgrading to a Plus D was cheaper. At the start of 1989, for example, a +3 with a **Multiface 3** (a peripheral for the +3 by **Romantic Robot** with its own 'magic button' for creating snapshots files - the +3 itself came with nothing like this) would have cost you £245; a Plus D system was faster, larger (up to 780k), had a much more sophisticated OS, was more compatible with existing Spectrum software than the +3 was, and cost just £140. The sheer power of a Plus D system, therefore, made it extremely popular with those who owned it. Although it was never supported by commercially released games, a very loyal user-base evolved; the system was supported by the long running **Format Magazine** (pictured left) of the **INDUG** user group.




## HOW DO YOU GET IT TO WORK?

The Plus D uses a very straightfoward syntax; the main thing to remember is that **LOAD** and **SAVE** commands are suffixed by either D1 or D2 depending on which drive you are accessing (the Plus D can support two). Thus:

| | | |
|---|---|---|
| **LOAD D1 "zxf"** | **LOAD D2 "zxf" CODE** | **MERGE D1 "zxf"** |
| **SAVE D1 "zxf"** | **SAVE D1 "zxf" LINE 10** | **SAVE D2 "zxf" SCREEN$** |

Although the interface pretty much refuses to work in physical conjunction with a Sinclair Interface 1, you *can* use the IF1's microdrive syntax in preference to the syntax above, so programs modified to work on a microdrive should work also on a Plus D formatted disk. Thus:

| | | |
|---|---|---|
| **LOAD D1 "zxf"** | could alternatively be typed as: | **LOAD *"m";1;"zxf"** |
| **SAVE D2 "zxf" LINE 10** | could alternatively be typed as: | **SAVE *"m";2;"zxf" LINE 10** |

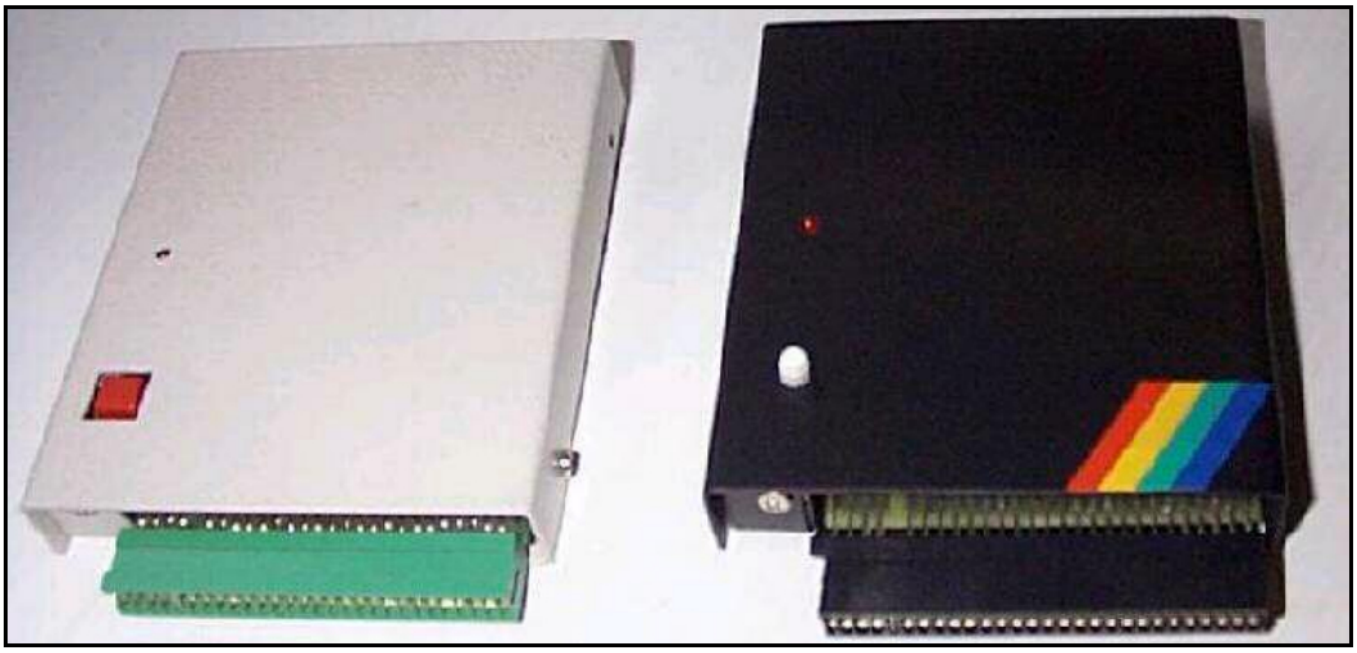
Other self-explanatory commands:

| | | |
|---|---|---|
| **CAT 1** | **ERASE D1 "ZXF"** | **VERIFY D2 "ZXF"** |

Snapshot files were denoted by an 'S' suffix for a 48K snapshot and a 'K' for a 128K snapshot, ie:

**LOAD D1 "zxf" S** or **LOAD D1 "zxf" K**

Want to know more? You'll be delighted to learn, then, that the original Plus D manual can be downloaded from the documentation page at **WoS** (**www.worldofspectrum.org/documentation.html**). **RealSpectrum** authors **Ramsoft** have written a document of their own (the DOS version of RealSpectrum supports the Plus D), which can be found at **www.ramsoft.bbk.org/tech/mgt_tech.txt**



www.worldofspectrum.org/NotThePlusD/

## SO HOW DO I GET HOLD OF ONE?

Original Plus D interfaces can fetch a fair old price on **ebay** - especially if they come with a disk drive included - prices can often exceed £50. Also, they don't come around very often.

Alternatively you could try building your own Plus D clone. Designed by Philip Mulrane, you can download the schematics for this from the *'I can´t believe it´s not the +D!'* pages at **www.worldofspectrum.org/NotThePlusD/.** Philip's own clone is pictured above on the right.

**Sintech** (**www.sintech-shop.de**) have been making and selling these clones for a while now, so you don't have to be an electronics whiz to be able to get your hands on one. The Sintech clones come uncased, however. So you might have to try your hand at a bit of metalwork (the Plus D's metal case doubles as a heat sink) if you're one to blush at the sight of it naked.

Another thing to bear in mind is that Plus Ds generally don't like modern floppy disk drives. You have to remember that at the time of its original creation high density drives weren't around yet - and today it's not possible to walk into a high street shop and buy anything other than a high density drive. Also, modern floppy drives are designed with the PC in mind. Happily, Sintech can also supply you with a compatible drive for around £17.

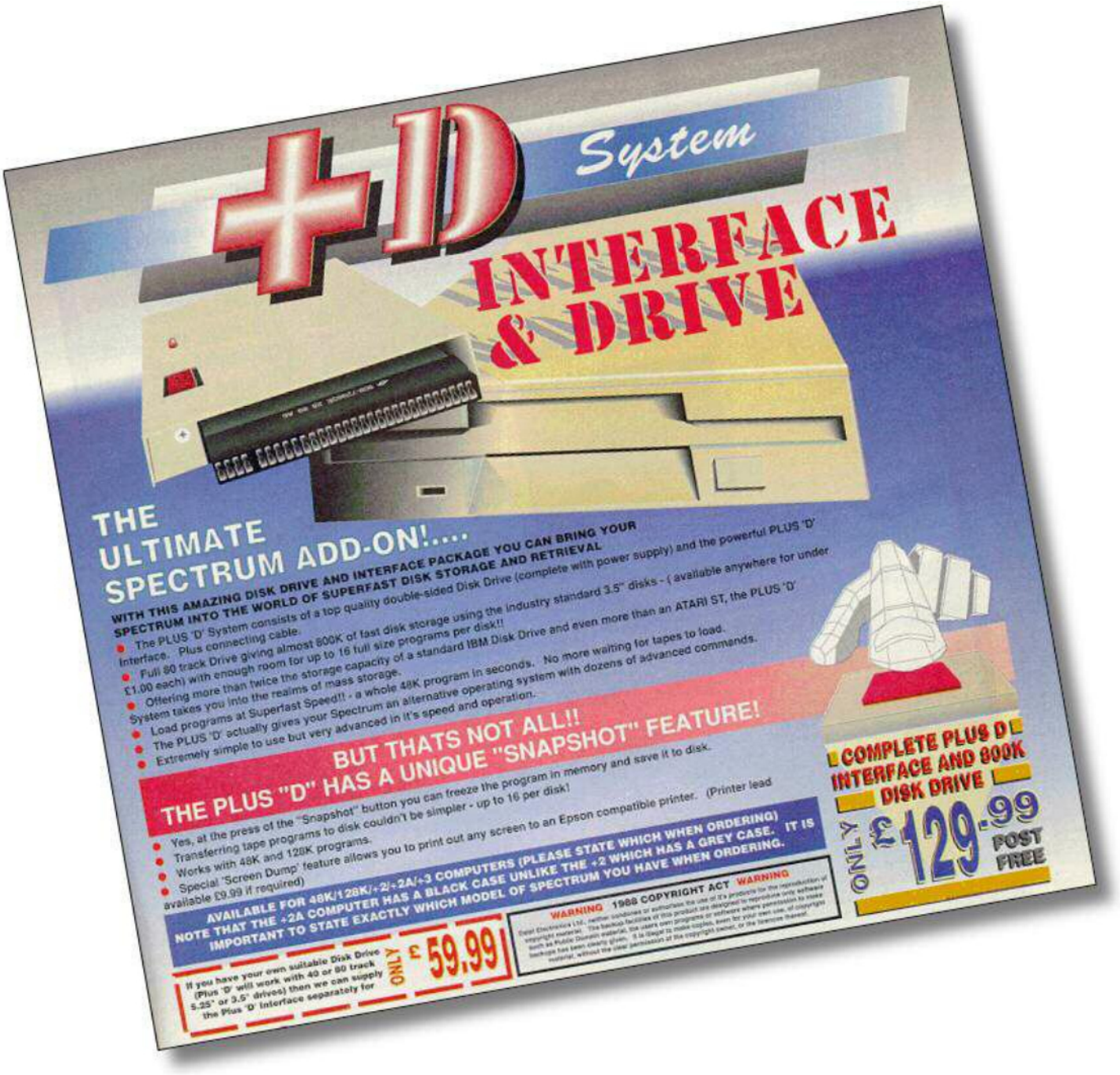
## SO HOW DO I EMULATE ONE?

If you can't wait for the next version of **Spectaculator** (or can't afford it), **RealSpectrum** from **Ramsoft** (**www.ramsoft.bbk.org**) has supported the Plus D for some time now. The support this emulator gives is mightily impressive actually - not only can you work with Plus D disk images on your hard disk (these go by the extension .IMG), but you can actually access real Plus D formatted disks from your PC's floppy drive. Alas, this feature is not available in **RS32** - the Windows port of RealSpectrum - and the DOS version in which it is available tends not to work on Windows XP systems. You can still work with Plus D disk images in RS32, however.

What's more, search for "Plus D" on **Sinclair Infoseek** at WoS and, right at the bottom of the page, you'll see a file called 'plusdtools.exe'. Download and run this and it will extract to a number of small DOS programs which appear to run quite happily on Windows XP, using your PC floppy drive to work with real Plus D formatted disks. They include:

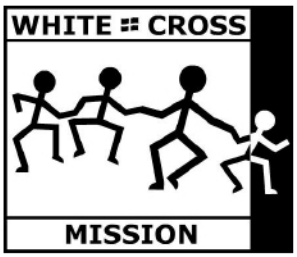
*SCAT.COM - CAT A: or B: of diskette ( Type "SCAT /?" )*

*SPIM.COM - Copies diskette image to Harddisk ( Type "SPIM /?" )*




## WHERE CAN I GET SOFTWARE FOR IT?

One of the best sources of Plus D software is from the **Alchemist Research PD Library,** archived at **ftp://ftp.worldofspectrum.org/pub/sinclair/alchemist-software/**. The library is stored as a series of disk images using the **Teledisk** format, so you'll need to unzip the files first and them convert each of these using **Teledisk** (a very old DOS program, a copy of which is linked to from **www.worldofspectrum.org/trdos.html**) onto an old double sided, double density disk (note - this appears **not** to work on a Windows XP machine). Before your very eyes your old floppy disk will transform into a Plus D formatted disk containing all the files, which you can them load straight into a Plus D system, an emulator with real disk support or alternatively convert it into a .IMG image file using, for example, **RealSpectrum**'s built-in disk image creator (again, this won't work on an XP machine, since RS32 doesn't support real disk access - you'll need to use the DOS version of RealSpectrum running on an older OS). It's quite a lengthy job and arduous job, and there are a lot of files to convert - discs full of demos, games and utilities; hopefully some very kind soul will one day go through all of this and upload the resulting .IMG files to WoS (although it might well be best to hang on and see if the Plus D enabled version of Spectaculator continues with the .IMG format or creates one of its own before comitting any time to doing this).




After Ceaucescu's death in 1990 over 120,000 children were discovered living in grim institutions. In the county of Jud Bihor in Western Romania, children who had been assessed as 'mentally retarded' at the age of three were sent to an institution in the country village of Cadea. They were housed in old buildings that had broken windows and no heating or plumbing. It was dark and dirty and for the majority of the time the children were confined to their cots. Most of them were tied to the bars by strips of cloth tied tightly around their wrists and ankles.

The children were always dirty, hungry and cold - sixty to seventy died every winter. Their original 'retardation' was the result of early illnesses such as pneumonia and bronchitis, and years of confinement at Cadea only compounded the problem. When they were finally released in January 1991, many could neither walk nor speak. All of the children rocked backwards and forwards in their distress; their eyes were glazed and unseeing. On release, many of the children were sent to hospital buildings in the mountain villages of Remeti and Bratca. It is here that the White Cross started assisting the local Romanian staff in their care.

Since the White Cross has been working with the children, over 600 people have travelled with the Mission to Romania. Some have only been able to give a few days of concentrated work, most average two months and one stayed for four years! Some work with the children, others repair the buildings and yet others deliver goods. Every volunteer is special. They raise their own money for air and train fares, insurance, food and electricity and more than half of them do it all over again and go out for a second or even third time. Old or young, with or without qualifications, the combined work and presence of these many different people has had an amazing impact on the children.

Children with blank, unseeing eyes, rocking in a world of their own are now healthy, laughing and boisterous. The accumulative effect of the White Cross volunteers with their mixture of naivety and experience, their energy, their perseverance, their hopes, their dreams and their many different ways of showing love has created a rainbow effect of bouncy, confident and individual children.

Fundatia Crucea Alba has helped White Cross Mission with the legalities of purchasing small farms, employing assistants and moving children from the mental institutions in order to live a normal family village life. We intend that these farms will be the children's homes for as long as they need. All their lives if necessary.

Buying the farms is only the beginning of a lifetime commitment to those children we take out of State care. Without a regular financial safety net we would be irresponsible if we established too many homes. We do, however, believe that this is the only way forward and are desperate for substantial funding.

The White Cross Mission is a Charitable Trust Registered in England No 1021176

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